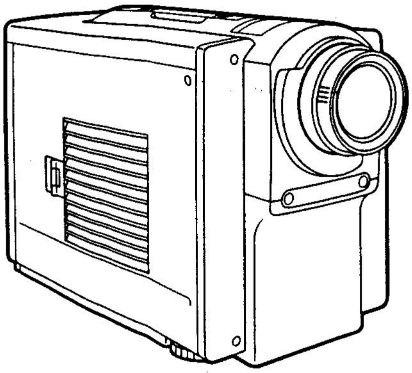
SHARP SERVICE MANUAL

S01L8XG2000U/



NTSC SYSTEM
LCD PROJECTOR

MODEL XG-2000U

In the interrests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used

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SHARP ELECTRONICS CORPORATION

Service Headquarters: Sharp Plaza, Mahwah, New Jersey 07430-2135 Phone; (201) 512-0055

SPECIFICATIONS

Name:	LCD Projector
Model:	XG-2000U
Color System:	NTSC system
Projection Image Size (Diagonal):	20 to 40 inch (51 to 102 cm) at a distance of approx. 5.2 ft (1.6 m) 50 to 100 inch (127 to 254 cm) at a distance of approx. 12.5 ft (3.8 m)
LCD Panels:	2.8" (4.28(H) x 5.75(W) cm) Twin-TFT Active Matrix Panels x 3
NO. of Pixels:	3 panels, each containing 217,945 pixels (653,835 pixels total)
Lens:	Zoom Lens, F4.5, f105—210 mm
Contrast Ratio:	100:1
Signal Input:	(1) S-VIDEO (2) Composite Video (BNC Type) (3) RGB Analog (15D-SUB Type)
Horizontal Resolution:	More than 400 lines
Operating Temperature:	5°C to 40°C (37°F to 104°F)
Storage Temperature:	– 20°C to 60°C (– 4°F to 140°F)
Power Source:	AC 120V, 60Hz
Power Consumption:	230W
Dimensions (W x D x H):	9" x $17\frac{5}{16}$" x $12\frac{5}{16}$" (229 mm x 439 mm x 312 mm)
Weight:	28.8 lbs. (13.1 kg)
Accessories:	Lens Cover .... 1pc. (installed) Air Filter .... 2pcs (one already installed) BNC Connector .... 2pcs Remote Control Unit .... 1 pc. Dry Battery (Type AA) 3pcs

Specifications are subject to change without notice.

IMPORTANT SERVICE SAFETY NOTES

■ Service work should be performed only by qualified service technicians who are thoroughly familiar with all safety checks and servicing guidelines as follows:

WARNING

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC power before servicing.

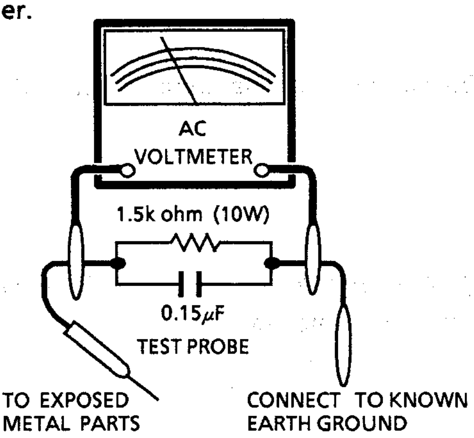
BEFORE RETURNING THE PROJECTOR: (Fire & Shock Hazard)

Before returning the projector to the user, perform the following safety checks:

1. Inspect lead wires are not pinched, between the chassis and other metal parts projector.
2. Inspect all protective devices such as non-metallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators, etc.
3. To be sure that no shock hazard exists, check for current leakage in the following manner:

- Plug the AC cord directly into a 120-volt AC outlet, (Do not use an isolation transformer for this test).
- Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15μF capacitor in parallel between all exposed metal cabinet parts and earth ground.
- Use an AC voltmeter with sensitivity of 5000 ohm per volt., or higher, sensitivity to measure the AC voltage drop across the resistor (See Diagram).
- All checks must be repeated with the AC plug connection reversed. (If necessary, a non-polarized adapter plug must be used only for the purpose of completing these checks.)

Any reading of 0.3 volts RMS (this corresponds to 0.2 milliamp. AC.) or more is excessive and indicates a potential shock hazard which must be corrected before returning the unit to the owner.



SAFETY NOTICE

Many electrical and mechanical parts in LCD Projector have special safety-related characteristics.

These characteristics are often not evident from visual inspection, nor can protection afforded by them be necessarily increased by using replacement components rated for higher voltage, wattage, etc.

Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by " ⚠" and shaded areas in the *Replacement Parts Lists* and *Schematic Diagrams*. For continued protection, replacement parts must be identical to those used in the original circuit. The use of a substitute replacement parts which do not have the same safety characteristics as the factory recommended replacement parts shown in this service manual, may create shock, fire or other hazards.

AVIS POUR LA SECURITE

De nombreuses pièces, électriques et mécaniques, dans les projecteur à LCD présentent des caractéristiques spéciales relatives à la sécurité, qui ne sont souvent pas évidentes à vue.

Le degré de protection ne peut pas être nécessairement augmentée en utilisant des pièces de remplacement étalonnées pour haute tension, puissance, etc.

Les pièces de remplacement qui présentent ces caractéristiques sont identifiées dans ce manuel; les pièces électriques qui présentent ces particularités sont identifiées par la marque " ⚠ " et hachurées dans la liste des pièces de remplacement et les diagrammes schématiques. Pour assurer la protection, ces pièces doivent être identiques à celles utilisées dans le circuit d'origine. L'utilisation de pièces qui n'ont pas les mêmes caractéristiques que les pièces recommandées par l'usine, indiquées dans ce manuel, peut provoquer des électrocutions, incendies ou autres accidents.

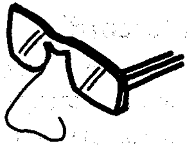
NOTE TO SERVICE PERSONNEL

UV-RADIATION PRECAUTION

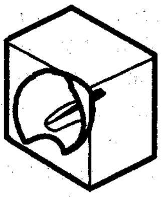
The light source, metal halide lamp, in the LCD projector emits small amounts of UV-Radiation.

AVOID DIRECT EYE AND SKIN EXPOSURE.

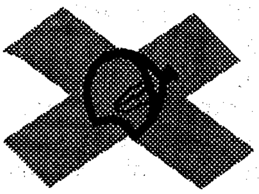
To ensure safety please adhere to the following:



1. Be sure to wear sun-glasses when servicing the projector with the lamp turned "on" and the top enclosure removed.



2. Do not operate the lamp outside of the lamp housing.



3. Do not operate for more than 2 hours with the enclosure removed.

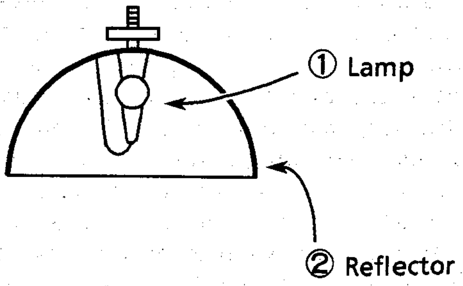
UV-Radiation and Medium Pressure Lamp Precautions

1. Be sure to disconnect the AC plug when replacing the lamp.
2. Allow one hour for the unit to cool down before servicing.
3. Replace only with same type lamp. Type **MSFR150S9** rated 80V/150W.
4. The lamp emits small amounts of UV-Radiation, avoid direct-eye contact.
5. The medium pressure lamp involves a risk of explosion. Be sure to follow installation instructions described below and handle the lamp with care.

■ Lamp Replacement

Note:

Since the lamp reaches a very high temperature during units operation replacement of the lamp should be done at least one hour after the power has been turned off. (to allow the lamp to cool off.)
Installing the new lamp, make sure not to touch the lamp (bulb) replace the lamp by holding its reflector ②.
[Replace with same type lamp.]



DANGER ! — Never turn the power on without the lamp to avoid electric-shock or damage of the devices since the stabilizer generates high voltages at its start.

WARNING: **High brightness light source, do not stare into the beam of light, or view directly. Be especially careful that children do not stare directly in to the beam of light.**

WARNING: **TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS UNIT TO MOISTURE OR WET LOCATIONS.**

⚡ **CAUTION** ⚠

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF
ELECTRIC SHOCK,
DO NOT REMOVE CABINET.
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE
PERSONNEL.

⚡ The lighting flash with arrowhead within a triangle is intended to tell the user that parts inside the product are risk of electric shock to persons.

⚠ The exclamation point within a triangle is intended to tell the user that important operating and servicing instructions are in the papers with the unit.

CAUTION (Ballast and Relay units)

5A 125V

For continued protection against a risk of fire, replace only with same type 5A 125V fuse.

CAUTION (Power unit)

For continued protection against a risk of fire, replace only with same type 2A 125V fuse.

2A 125V

AVERTISSEMENT: **Source lumineuse de grande intensité. Ne pas fixer le faisceau lumineux ou le regarder directement. Veiller particulièrement à éviter que les enfants ne fixent directement le faisceau lumineux.**

AVERTISSEMENT: **AFIN D'EVITER TOUT RISQUE D'INCENDIE OU D'ELECTROCUTION, NE PAS PLACER CET APPAREIL DANS UN ENDROIT HUMIDE OU MOUILLE.**

⚡ **CAUTION** ⚠

RISK OF ELECTRIC SHOCK
DO NOT OPEN

ATTENTION: POUR REDUIRE LES RISQUES
D'ELECTROCUTION, NE PAS RETIRER LE CAPOT.
AUCUNE DES PIECES INTERIEURES N'EST
REPARABLE PAR L'UTILISATEUR.
POUR TOUTE REPARATION, S'ADRESSER A UN
TECHNICIEN D'ENTRETIEN QUALIFIE.

⚡ L'éclair terminé d'une flèche à l'intérieur d'un triangle indique à l'utilisateur que les pièces se trouvant dans l'appareil sont susceptibles de provoquer une décharge électrique.

⚠ Le point d'exclamation à l'intérieur d'un triangle indique à l'utilisateur que les instructions de fonctionnement et d'entretien sont détaillées dans les documents fournis avec l'appareil.

PRECAUTION (Unités de charge et de relais)

5A 125V

Pour une protection continue contre les risques d'incendie, ne remplacer qu'avec un fusible 5A 125V du même type.

PRECAUTION (Unités d'alimentation)

Pour une protection continue contre les risques d'incendie, ne remplacer qu'avec un fusible 2A 125V du même type.

2A 125V

Location of Controls

Refer to the page numbers indicated after the controls for further details.

About the Temperature Monitor Function:

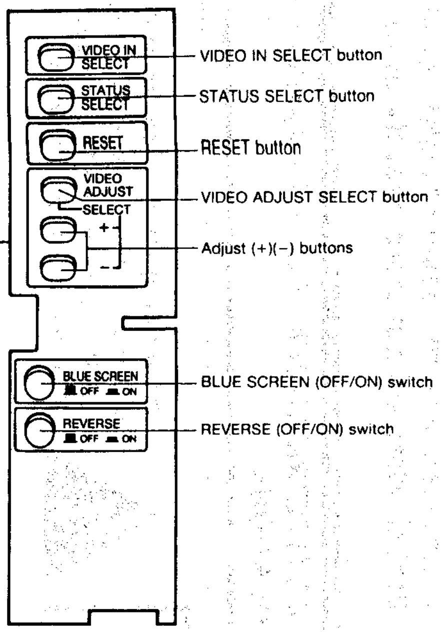
ON SCREEN DISPLAY

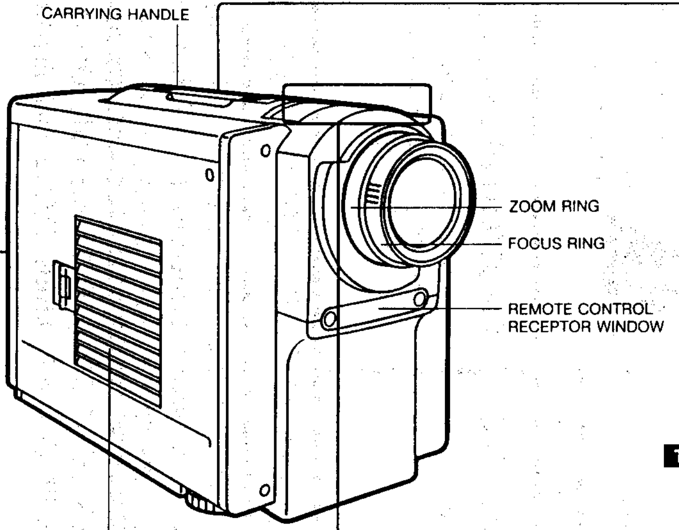
TEMPERATURE

- If the projector starts to overheat due to set-up problems or a dirty filter, "TEMPERATURE" will flash in the upper-left portion of the picture. If the temperature continues to rise, then the Temperature Monitor Indicator will turn on and the power will shut off. Refer to page **19**, "Maintenance Indicator", when the warning appears in the picture.
- The Cooling Fan regulates the internal temperature and its performance is automatically controlled. The sound of the fan may change during operation due to changes in the fan speed.

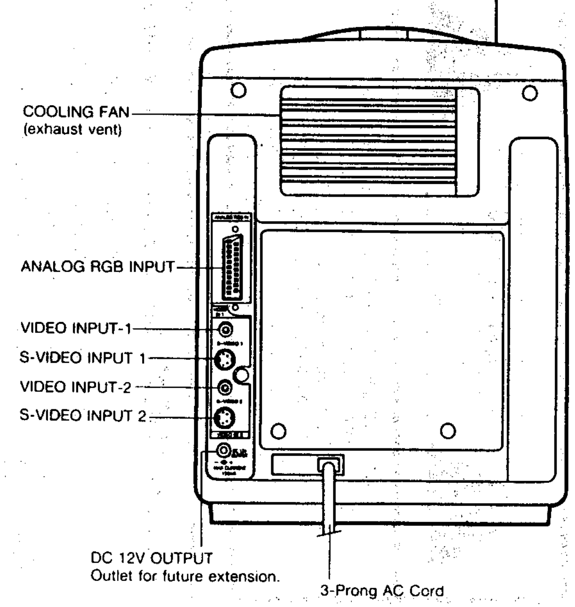
INSIDE THE DOOR

Place a finger under the "PULL OPEN" portion and lift.

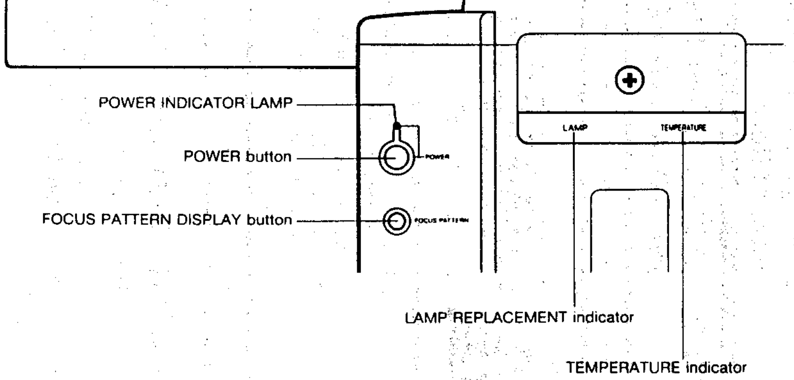

VIDEO IN SELECT
STATUS SELECT
RESET
VIDEO ADJUST
SELECT
+
–
BLUE SCREEN
OFF ON
REVERSE
OFF ON
VIDEO IN SELECT button
STATUS SELECT button
RESET button
VIDEO ADJUST SELECT button
Adjust (+)(–) buttons
BLUE SCREEN (OFF/ON) switch
REVERSE (OFF/ON) switch


CARRYING HANDLE
ZOOM RING
FOCUS RING
REMOTE CONTROL RECEPTOR WINDOW
COOLING FAN (intake vent)
Filter Compartment

REAR VIEW


COOLING FAN
(exhaust vent)
ANALOG RGB INPUT
VIDEO INPUT-1
S-VIDEO INPUT 1
VIDEO INPUT-2
S-VIDEO INPUT 2
DC 12V OUTPUT
Outlet for future extension.
3-Prong AC Cord

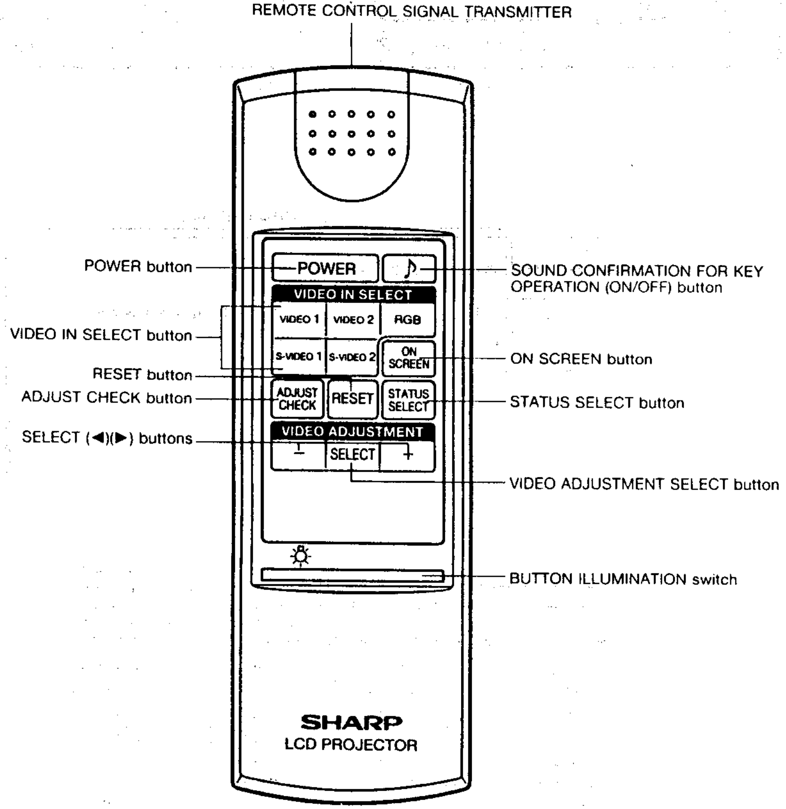
TOP VIEW


POWER INDICATOR LAMP
POWER button
FOCUS PATTERN DISPLAY button
POWER
FOCUS PATTERN
LAMP
TEMPERATURE
LAMP REPLACEMENT indicator
TEMPERATURE indicator

Location of Controls

Refer to the page numbers indicated after the controls for further details.

REMOTE CONTROL


REMOTE CONTROL SIGNAL TRANSMITTER
POWER button
VIDEO IN SELECT button
RESET button
ADJUST CHECK button
SELECT (◀)(▶) buttons
SOUND CONFIRMATION FOR KEY OPERATION (ON/OFF) button
ON SCREEN button
STATUS SELECT button
VIDEO ADJUSTMENT SELECT button
BUTTON ILLUMINATION switch
POWER
♪
VIDEO IN SELECT
VIDEO 1
VIDEO 2
RGB
S-VIDEO 1
S-VIDEO 2
ON SCREEN
ADJUST CHECK
RESET
STATUS SELECT
VIDEO ADJUSTMENT
−
SELECT
+
SHARP
LCD PROJECTOR

Setting Up the Projector

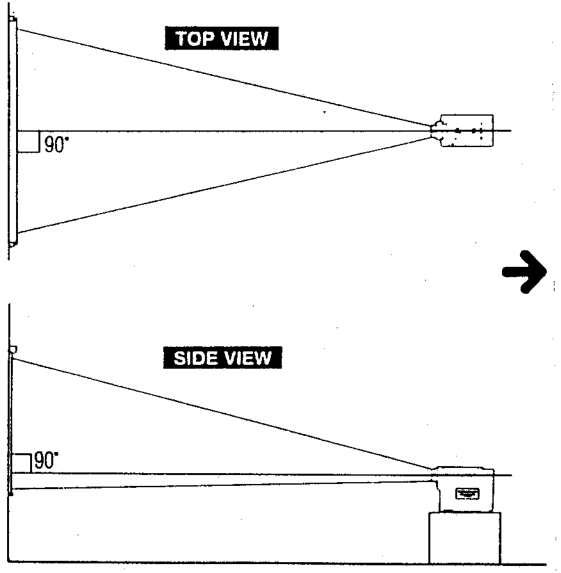
How to set up the projector and screen

Caution: When you set up the projector

- Do not place it in humid or dusty places, or places where the air is sooty or full of cigarette smoke. If the lens, mirror, or other optical components become dirty, the picture will blur or darken, making viewing difficult.
- Do not expose to extremes of heat or cold.
  Operating temperature: 5°C – 40°C (41°F – 104°F)
  Storage temperature: −20°C – 55°C (−4°F – 131°F)

Example of a standard setup

- ■ Position the screen so that it is not in direct sunlight or room light. Light falling directly onto the screen washes out colors, making viewing difficult. Close the curtains and dim the lights when using the screen in a bright or sunny room.
- ■ The best picture will be obtained when the projector is at a 90 degree angle to the screen. Position the projector and screen as shown.


TOP VIEW
90°
SIDE VIEW
90°

•Results in correct picture.

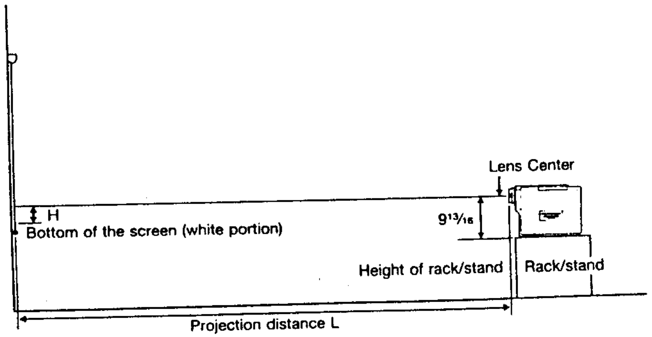
If the projector and screen settings are incorrect, the picture will be distorted, making viewing difficult.

Setting Up the Projector

- The projector is equipped with a 2× zoom lens, which lets you increase an image to double the minimum size at a given distance.
(Example: At a projection distance of 12′5″, a picture size of 100 inches at maximum magnification can be reduced to a 50 inch size at minimum magnification by using the zoom lens.)
- The picture can be focused when the projector is within 5′3″ to 24′3″ of the screen. Please set up the projector within this range.

Picture size	Projection distance L		Height from bottom of screen to lens center H
	Minimum projection distance	Maximum projection distance	
150 inches	18.37 ft	24.29 ft	18.50 in.
100 inches	12.46 ft	24.29 ft	12.20 in.
80 inches	10.17 ft	20.34 ft	9.80 in.
60 inches	7.54 ft	15.42 ft	7.48 in.
40 inches	5.25 ft	10.50 ft	4.72 in.

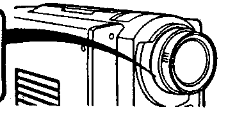
- If the corners of the picture are distorted at the minimum projection distance, try moving the projector back slightly.
- Maximum distance from the screen at which the picture can be focused is 24′3″. Accordingly, 150 inch or 100 inch picture size cannot be projected at lowest magnification.



- After deciding the projector's position, adjust the picture size and focus as shown.

1 Adjusting the picture size

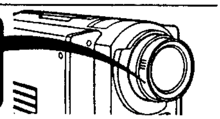
Adjust the picture size by rotating the Zoom Ring.



- Even when it is not possible to obtain the correct projection distance for the desired picture size due to the size of the set-up area, you can still adjust the picture to any size within the magnification range of the Zoom Lens.

2 Adjusting the focus

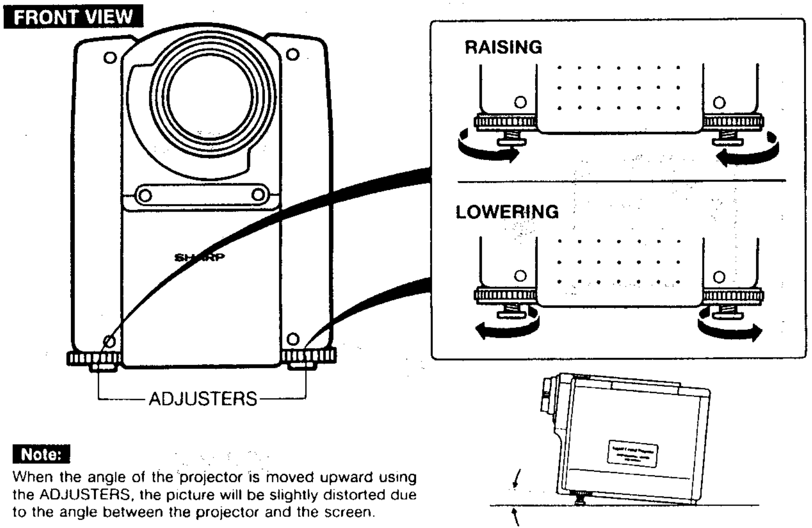
Adjust the focus by rotating the Focus Ring.



- Adjust the focus so that the picture on the screen is as clear as possible.
- For more accurate focusing utilize the focus pattern. (See page 15)

Leveling and Height Adjustments

- If the screen is mounted higher than the projector, use the ADJUSTERS on the bottom of the projector to adjust the vertical angle of the projector, as shown.

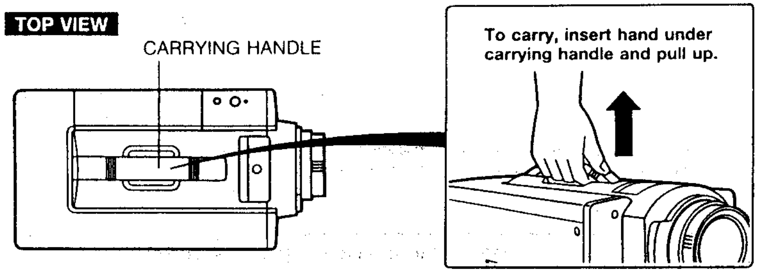


Note:
When the angle of the projector is moved upward using the ADJUSTERS, the picture will be slightly distorted due to the angle between the projector and the screen.

Range of adjustment is approx. 5 degrees.

When moving the projector

- Use the Carrying Handle when moving the projector.



To carry, insert hand under carrying handle and pull up.

Note:
When moving the projector, cover the lens with the lens cap for protection.

Connecting the Projector

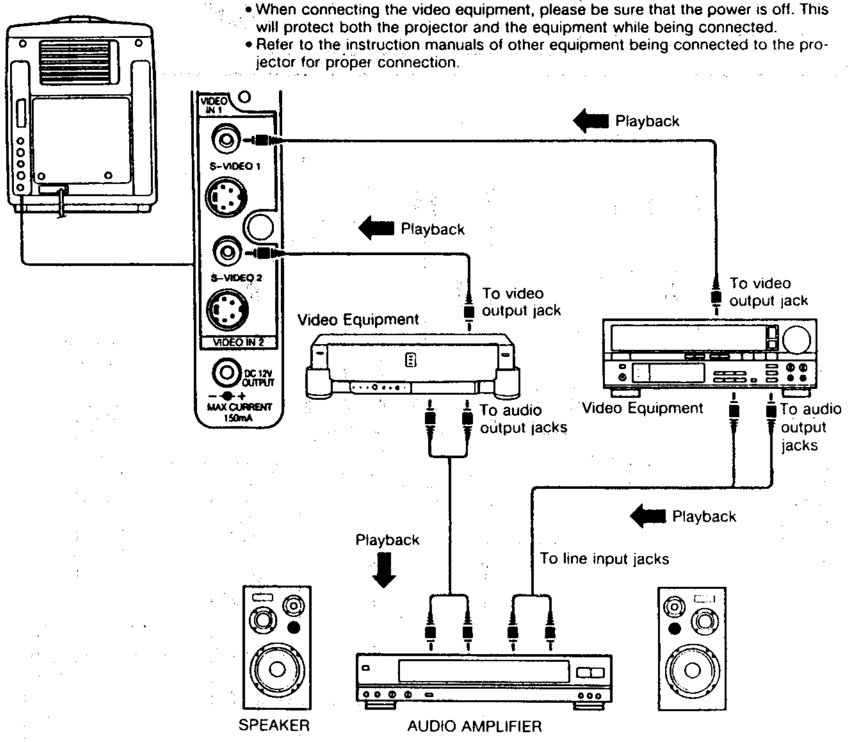
SYSTEM 1

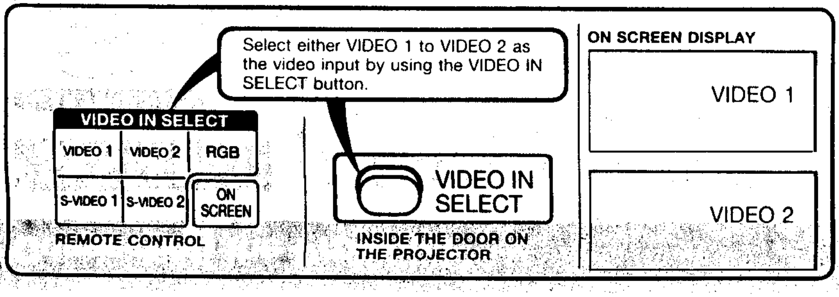
To connect the projector to video and audio equipment for viewing played-back images. (With an audio amplifier connection.)

REAR TERMINALS

Notes:

- When connecting the video equipment, please be sure that the power is off. This will protect both the projector and the equipment while being connected.
- Refer to the instruction manuals of other equipment being connected to the projector for proper connection.

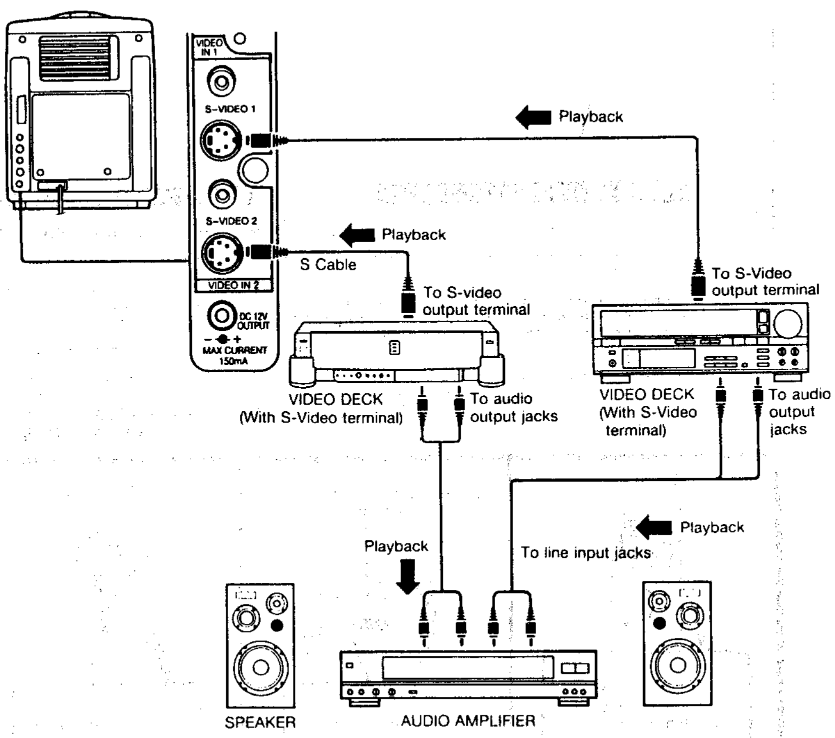

VIDEO IN 1
S-VIDEO 1
S-VIDEO 2
VIDEO IN 2
DC 12V OUTPUT
MAX CURRENT 150mA
Playback
Playback
To video output jack
Video Equipment
To video output jack
To audio output jacks
Video Equipment
To audio output jacks
Playback
Playback
To line input jacks
SPEAKER
AUDIO AMPLIFIER

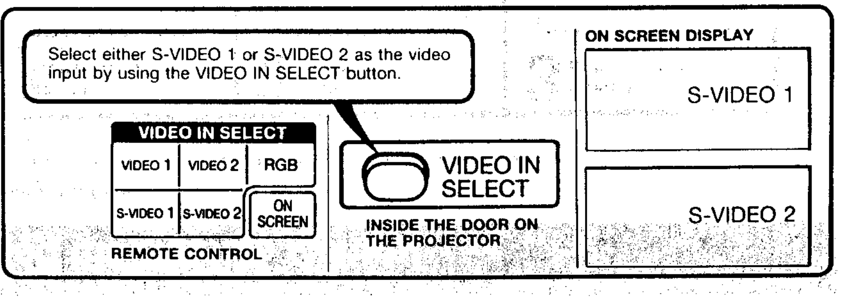

Select either VIDEO 1 to VIDEO 2 as the video input by using the VIDEO IN SELECT button.
VIDEO IN SELECT
VIDEO 1
VIDEO 2
RGB
S-VIDEO 1
S-VIDEO 2
ON SCREEN
REMOTE CONTROL
VIDEO IN SELECT
INSIDE THE DOOR ON THE PROJECTOR
ON SCREEN DISPLAY
VIDEO 1
VIDEO 2

SYSTEM 2

To connect the projector to video and audio equipment using the S-video terminals, for viewing played-back images. (With an audio amplifier connection.)

REAR TERMINALS


VIDEO IN 1
S-VIDEO 1
S-VIDEO 2
VIDEO IN 2
DC 12V OUTPUT
MAX CURRENT 150mA
Playback
Playback
S Cable
To S-video output terminal
To S-Video output terminal
VIDEO DECK (With S-Video terminal)
To audio output jacks
VIDEO DECK (With S-Video terminal)
To audio output jacks
Playback
Playback
To line input jacks
SPEAKER
AUDIO AMPLIFIER


Select either S-VIDEO 1 or S-VIDEO 2 as the video input by using the VIDEO IN SELECT button.
VIDEO IN SELECT
VIDEO 1
VIDEO 2
RGB
S-VIDEO 1
S-VIDEO 2
ON SCREEN
REMOTE CONTROL
VIDEO IN SELECT
INSIDE THE DOOR ON THE PROJECTOR
ON SCREEN DISPLAY
S-VIDEO 1
S-VIDEO 2

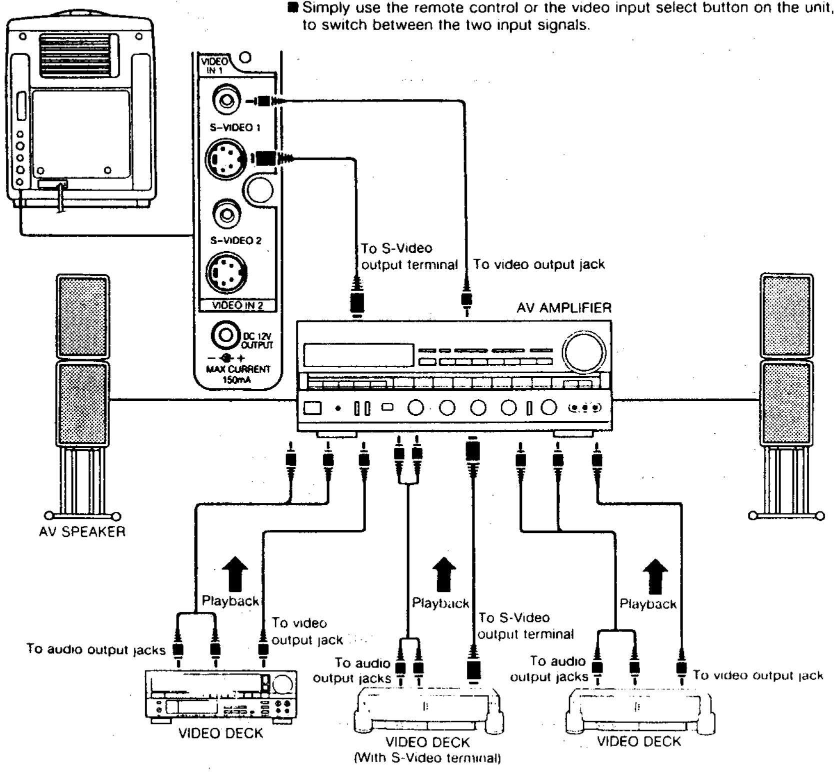
Connecting the Projector

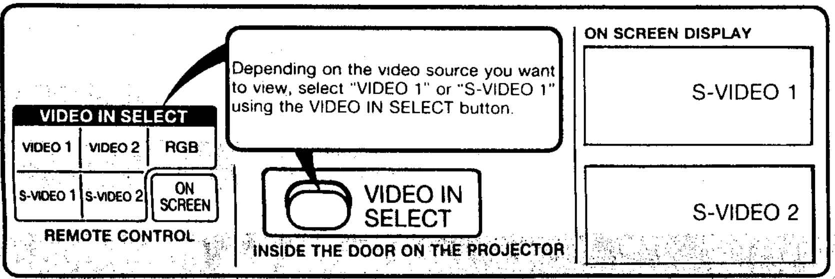
SYSTEM 3

To connect the projector to video and audio equipment for viewing played-back images. (With an AV amplifier connection.)

- ■ When connecting equipment with an S-video output, such as an S-VHS VCR, and one or more video decks to an AV amplifier, connect both the S-VIDEO -1 terminal and the VIDEO-1 jack on the projector.
- ■ Simply use the remote control or the video input select button on the unit, to switch between the two input signals.

REAR TERMINALS


VIDEO IN 1
S-VIDEO 1
S-VIDEO 2
VIDEO IN 2
DC 12V OUTPUT
MAX CURRENT 150mA
To S-Video output terminal
To video output jack
AV AMPLIFIER
AV SPEAKER
Playback
To video output jack
To audio output jacks
VIDEO DECK
Playback
To S-Video output terminal
To audio output jacks
VIDEO DECK
(With S-Video terminal)
Playback
To audio output jacks
To video output jack
VIDEO DECK


Depending on the video source you want to view, select "VIDEO 1" or "S-VIDEO 1" using the VIDEO IN SELECT button.

VIDEO IN SELECT
VIDEO 1
VIDEO 2
RGB
S-VIDEO 1
S-VIDEO 2
ON SCREEN
REMOTE CONTROL
VIDEO IN SELECT
INSIDE THE DOOR ON THE PROJECTOR
ON SCREEN DISPLAY
S-VIDEO 1
S-VIDEO 2

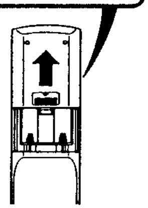
Using the Remote Control

Inserting the Batteries

Before using the remote, insert the batteries supplied with the accessories.

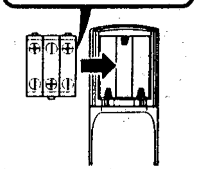
1 Open the Battery Cover.

Slide the battery cover in the direction of the arrow.



2 Insert the batteries.

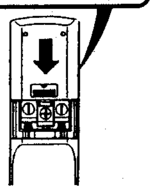
Insert the batteries with the polarities (⊕ and ⊖) as shown.



Supplied batteries:
Three R6 (UM/SUM-3 or AA) batteries

3 Close the Battery Cover.

Close the cover by sliding in the direction of the arrow until the cover locks with a click.



NOTE ON BATTERIES

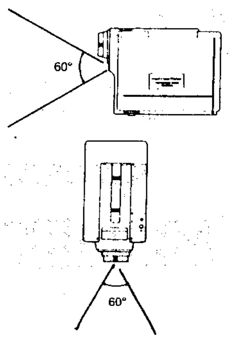
Incorrect use of batteries may cause them to leak or burst.

- Insert the batteries with the their polarities (⊕ and ⊖) orientated correctly as indicated.
- Remove the batteries if the remote control will not be operated for an extended period of time. Maintain the batteries in clean condition.
- Do mix battery brands in use.
- Do not mix old and new batteries. The life expectancy of the new batteries will be shortened and the old batteries may leak.
- When batteries have been used up, remove them to prevent leakage. Leaked battery fluid may irritate the skin; use a cloth to wipe away.
- Due to storage conditions and the shelf life of the supplied batteries, they may run out in a short time. Replace them with new batteries as soon as possible.

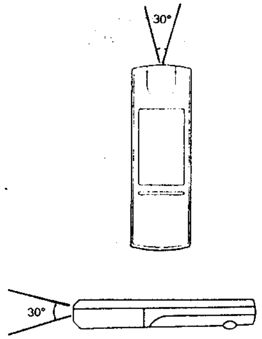
Using the Remote Control

■ Refer to the diagrams below before using the Remote Control.

SIGNAL RECEPTION RANGE



SIGNAL TRANSMISSION RANGE



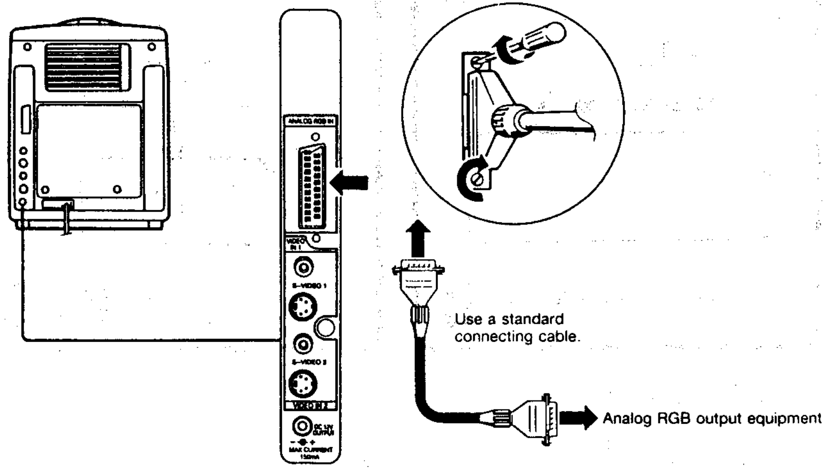
Connecting the Projector (RGB Video)

ATTENTION:

- This is an analog RGB input (15.75kHz composite sync). Do not connect a digital RGB signal to this input. Use a TTL-to-analog converter if using a digital RGB output such as a CGA computer.
- This is not a multi-sync device. The projector will only work with an NTSC composite sync output of 15.75kHz.
- Refer to the technical specs on the next page before connecting any equipment to the projector.
- Refer to the 15-pin connector description below before connecting any computer or RGB output device.
- The analog RGB input requires a 15.75kHz composite sync (negative polarity) signal. A scan converter or RGB-to-video interface may be required in order to use the projector with scan rate signals other than 15.75kHz. (ie, VGA and macintosh II computers' graphics cards)
- Signals input to the analog RGB input will be compressed to an image of 320 dots by 200 lines.
- For interface adaptors and cables, contact your local authorized SHARP dealer.

REAR VIEW

REAR CONNECTOR



Use a standard connecting cable.

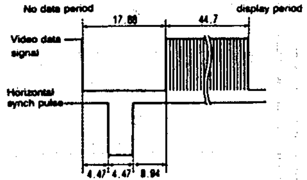
Analog RGB output equipment

RGB Input signal

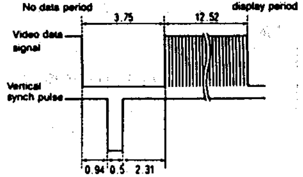
Video signal	Separate RGB type	0～0.7Vp-p	Positive polarity
Composite synch signal		TTL levels	Negative polarity

Timing Chart of Video Signal (Typical Examples)

a) Timing of video signal and horizontal synch pulse area. (unit: ms)

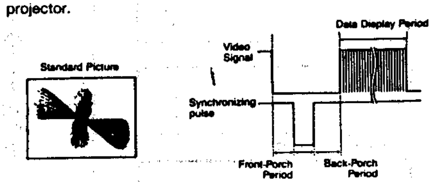


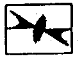
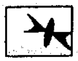
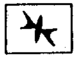
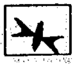
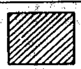
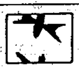
b) Timing of video signal and vertical synch pulse area. (unit: ms)



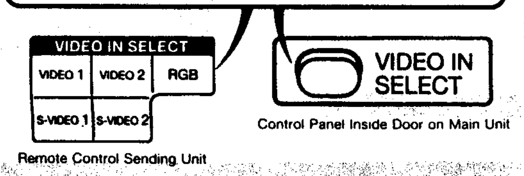
NOTE ABOUT ANALOG RGB INPUT SIGNALS

If signals other than those recommended are input, the image may be distorted as shown in the table to the right due to signal timing skew etc.. This is not due to any problem with the projector.



	Problem	Image	Cause
A	The image is horizontally stretched or compressed.		Horizontal data display period is longer or shorter than the recommended value.
B	The image is skewed to the extreme right or left of the screen		Horizontal back-porch period or front-porch period deviates from the recommended value.
C	The image is vertically stretched or compressed.		Vertical data display period is longer or shorter than the recommended value.
D	The image is skewed to the extreme top or bottom of the screen.		Vertical back-porch period or front-porch period deviates from the recommended value.
E	The image has streaking.		Horizontal synch frequency deviates from the recommended range of values.
F	The image scrolls vertically (rolling).		Vertical synch frequency deviates from the recommended range of values.

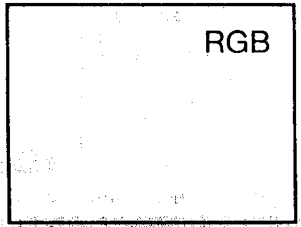
Use the INPUT SELECT button to set the picture to "RGB", "S-VIDEO", or "VIDEO", depending on which input jack is being used.

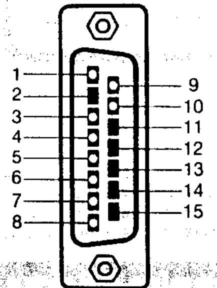


Remote Control Sending Unit

Control Panel Inside Door on Main Unit

ON SCREEN DISPLAY
(ex.: RGB has been selected.)





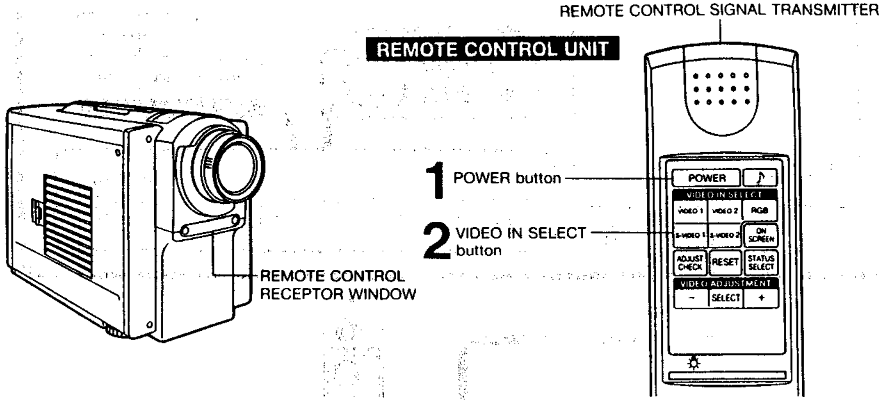
RGB Analog Video Input Connector

The RGB Analog Video Input terminal accepts a 15-pin D-Sub connector. The signal input to each pin must be as follows:

1. Red input
2. GND
3. Green input
4. GND
5. Blue input
6. GND
7. —
8. GND
9. —
10. —
11. —
12. —
13. —
14. Composite sync or horizontal sync input signal
15. Vertical sync input signal

Note: Pins 7, 9, 10, 11, 12, 13 are not connected to the projector.

Basic Operation of the Projector

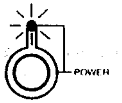

REMOTE CONTROL SIGNAL TRANSMITTER
REMOTE CONTROL UNIT
1 POWER button
2 VIDEO IN SELECT button
REMOTE CONTROL RECEPTOR WINDOW
POWER
VIDEO IN SELECT
VIDEO 1
VIDEO 2
RGB
S-VIDEO 1
S-VIDEO 2
ON SCREEN
ADJUST CHECK
RESET
STATUS SELECT
VIDEO ADJUSTMENT
−
SELECT
+

1 Turn ON the POWER

Press the POWER button

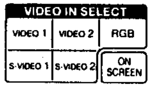
POWER

Flashing green ··· **warming up**
Green ··· **lamp is ignited**



2 Selecting the video source

Press the VIDEO SELECT button to select the desired video input terminal.


VIDEO IN SELECT
VIDEO 1
VIDEO 2
RGB
S-VIDEO 1
S-VIDEO 2
ON SCREEN

- The video image from the video source connected to the selected input terminal is displayed.

The selected video source is indicated in the upper right portion of the screen for about 4 seconds.

ON SCREEN DISPLAY

VIDEO 1

(Example: VIDEO 1 was selected in this case)

Notes:

- Even when the power is turned off by using the POWER button, the COOLING FAN will continue to operate as long as the projector's internal temperature remains high (usually for about 2 min.). Do not disconnect the AC power cord plug while the COOLING FAN is operating.
- If the projector is turned on immediately after it has been turned off, it may take a short while before the lamp is turned on. (During this period the POWER indicator lamp flashes green.)

Video Adjustment

- When the RESET button is pressed, the projector video adjustments are set to the factory preset positions. The picture can be adjusted to fit personal preferences by using the VIDEO ADJUSTMENT buttons on the REMOTE CONTROL.
- The adjustments can be memorized in the STATUS settings 1-5.

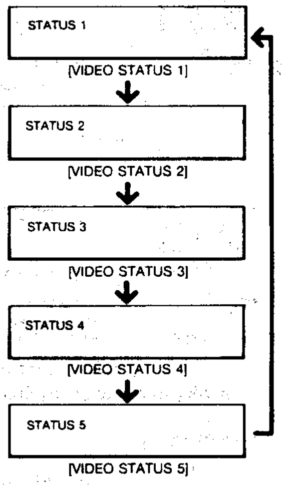
Video Adjustments

1 Use the STATUS SELECT button to select the video status you want to change.

STATUS SELECT

Each time the STATUS button is pressed, the display will change.

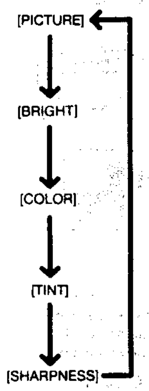
ON SCREEN DISPLAY


STATUS 1
[VIDEO STATUS 1]
STATUS 2
[VIDEO STATUS 2]
STATUS 3
[VIDEO STATUS 3]
STATUS 4
[VIDEO STATUS 4]
STATUS 5
[VIDEO STATUS 5]

2 Adjust the picture by using the VIDEO ADJUSTMENT SELECT button and SELECT (+)(−) buttons.

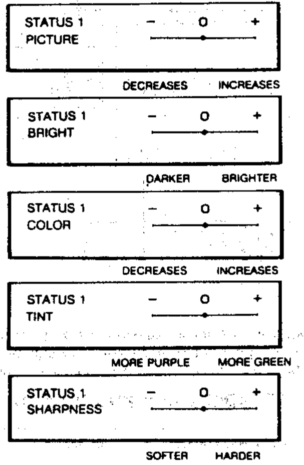
VIDEO ADJUSTMENT
− | SELECT | +

Each time you press the VIDEO ADJUSTMENT SELECT button while the On Screen Display is visible, the item selected for adjustment will change.


[PICTURE]
[BRIGHT]
[COLOR]
[TINT]
[SHARPNESS]

When you press the SELECT (+)(−) buttons, the " ● " mark will move.

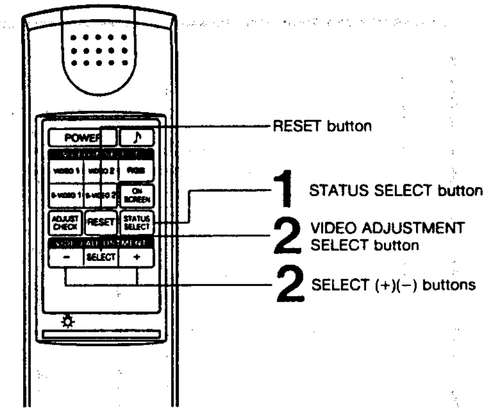
ON SCREEN DISPLAY


STATUS 1
PICTURE
− 0 +
DECREASES
INCREASES
STATUS 1
BRIGHT
− 0 +
DARKER
BRIGHTER
STATUS 1
COLOR
− 0 +
DECREASES
INCREASES
STATUS 1
TINT
− 0 +
MORE PURPLE
MORE GREEN
STATUS 1
SHARPNESS
− 0 +
SOFTER
HARDER

Note:

- All video STATUS settings are set to standard preset positions when the projector is shipped from the factory.

REMOTE CONTROL UNIT


POWER
VIDEO 1
VIDEO 2
RGB
S-VIDEO 1
S-VIDEO 2
ON SCREEN
ADJUST CHECK
RESET
STATUS SELECT
VIDEO ADJUSTMENT
SELECT
RESET button
1 STATUS SELECT button
2 VIDEO ADJUSTMENT SELECT button
2 SELECT (+)(−) buttons

Factory Preset

Press the RESET button

RESET

- The RESET picture (as when shipped from factory) is selected.

ON SCREEN DISPLAY

RESET

To select video status

Press the STATUS SELECT button to select the desired video status mode.

STATUS SELECT

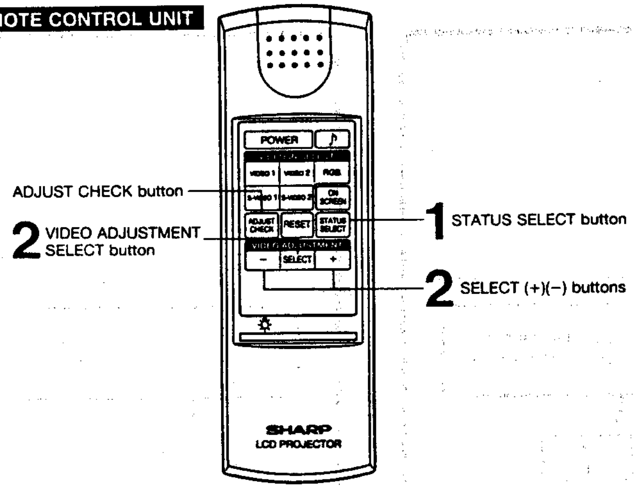
- "STATUS 2" is displayed on the screen and the color picture is automatically adjusted according to the conditions stored in status setting 2.

ON SCREEN DISPLAY

STATUS 2

(Example: Display when STATUS 2 is selected)

REMOTE CONTROL UNIT


POWER
VIDEO 1
VIDEO 2
RGB
S-VIDEO 1
S-VIDEO 2
ON SCREEN
ADJUST CHECK
RESET
STATUS SELECT
VIDEO ADJUSTMENT
SELECT
ADJUST CHECK button
2 VIDEO ADJUSTMENT SELECT button
1 STATUS SELECT button
2 SELECT (+)(−) buttons
SHARP
LCD PROJECTOR

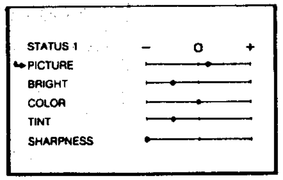
Adjustment Check

Press the ADJUST CHECK button.

ADJUST CHECK

When the ADJUST CHECK button is pressed, the status and contents of adjustments are displayed.

ON SCREEN DISPLAY


STATUS 1
−
0
+
PICTURE
BRIGHT
COLOR
TINT
SHARPNESS

- Press the button again to switch off the on-screen display.

- The image can be adjusted using the VIDEO ADJUSTMENT SELECT button and the SELECT (+)(−) buttons even in the adjustment confirmation mode (while the contents of adjustments are displayed on the screen).

Changing video adjustments while in the "Adjust Check" Mode.

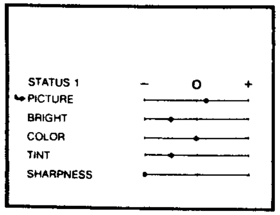
1 Select the status you want to change using the STATUS SELECT button.

STATUS
SELECT

Each time the button is pressed, the display will change.

[STATUS 1]
↓
[STATUS 2]
↓
[STATUS 3]
↓
[STATUS 4]
↓
[STATUS 5]

ON SCREEN DISPLAY


STATUS 1
−
0
+
PICTURE
BRIGHT
COLOR
TINT
SHARPNESS

- The presently selected status is displayed.

2 Adjusting the picture to your preference using the VIDEO ADJUSTMENT SELECT button and the SELECT (+)(−) buttons.

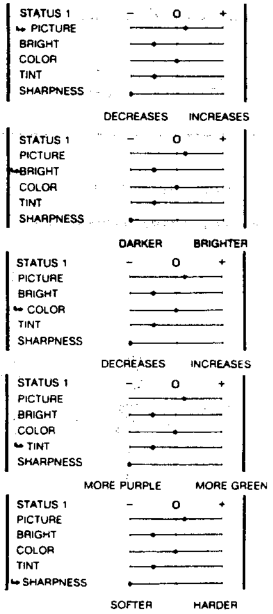
VIDEO ADJUSTMENT
−
SELECT
+

Each time you press the VIDEO ADJUSTMENT SELECT while the display is shown, the "↳" mark will move to indicate the selected video status item for adjustment.

[PICTURE]
↓
[BRIGHT]
↓
[COLOR]
↓
[TINT]
↓
[SHARPNESS]

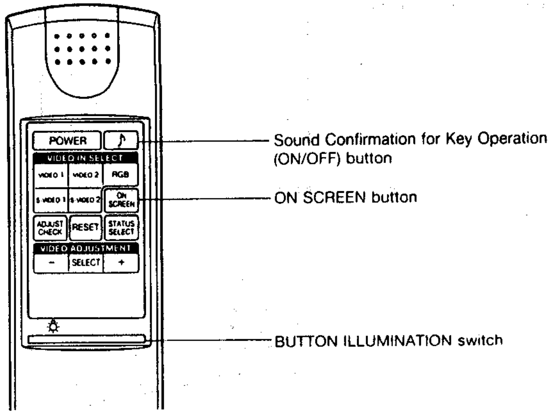
When the SELECT (+)(−) buttons are pressed, the "●" mark moves.

ON SCREEN DISPLAY


STATUS 1
−
0
+
PICTURE
BRIGHT
COLOR
TINT
SHARPNESS
DECREASES
INCREASES
DARKER
BRIGHTER
DECREASES
INCREASES
MORE PURPLE
MORE GREEN
SOFTER
HARDER

Convenient Features

REMOTE CONTROL UNIT


POWER
VIDEO IN SELECT
VIDEO 1
VIDEO 2
RGB
S-VIDEO 1
S-VIDEO 2
ON SCREEN
ADJUST CHECK
RESET
STATUS SELECT
VIDEO ADJUSTMENT
−
SELECT
+
Sound Confirmation for Key Operation (ON/OFF) button
ON SCREEN button
BUTTON ILLUMINATION switch

Using the remote control in a dark room

Press the BUTTON ILLUMINATION switch

- The operation buttons stay illuminated for about 5 seconds.

To have sound confirmation when the Remote Control buttons are pressed.

Press the Sound Confirmation for Key Operation (ON/OFF) button

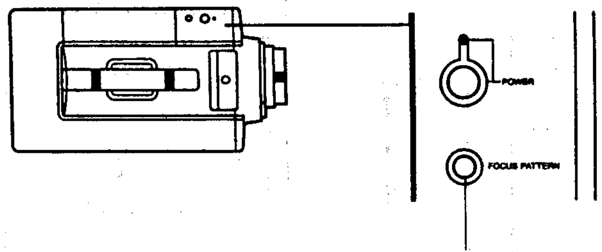
- Every time a button is pressed a beep tone will be heard.

Note:

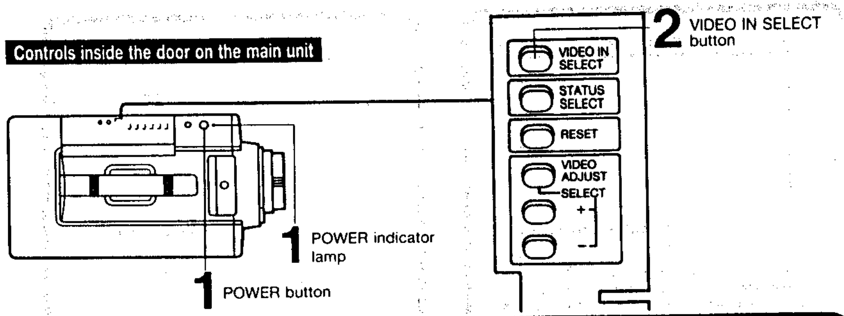
- If any of the operation buttons are pressed, the operation buttons will illuminate.
- If any of the operation buttons are pressed while the buttons are illuminated, they will stay illuminated for about 5 seconds after the button was pressed.

Basic Operation Using the Controls on the Projector

TOP VIEW

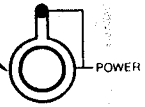

POWER
FOCUS PATTERN
FOCUS PATTERN display button

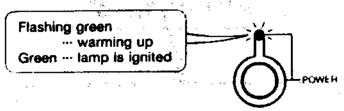
Controls inside the door on the main unit


VIDEO IN SELECT
STATUS SELECT
RESET
VIDEO ADJUST
SELECT
+
–
2 VIDEO IN SELECT button
1 POWER indicator lamp
1 POWER button

1 Turn ON the POWER

Press the POWER button




Flashing green ··· warming up
Green ··· lamp is ignited
POWER

2 Selecting the video source

Press the VIDEO IN SELECT button to select the desired video input terminal.

VIDEO IN SELECT

- The video image from the video source connected to the selected input terminal is displayed.

The selected video input terminal is indicated in the upper right portion of the screen for about 4 seconds.

ON SCREEN DISPLAY

VIDEO 1

(Example: VIDEO 1 is selected)

- Changes each time you press the button.

[VIDEO 1]
↓
[S-VIDEO 1]
↓
[VIDEO 2]
↓
[S-VIDEO 2]
↓
[RGB]

Confirming selected video input terminal and video status

Press the ON SCREEN button

- The selected video input terminal and video status are indicated on the screen for about 4 seconds.

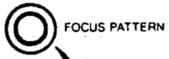
ON SCREEN DISPLAY

VIDEO 1

STATUS 1

(Example: VIDEO 1 and STATUS 1 are selected)

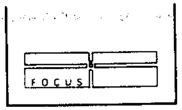
To focus more accurately


FOCUS PATTERN

Press the FOCUS PATTERN display button

- The focus pattern for accurate focusing is displayed on the screan for about 15 seconds. Use the pattern to focus the projector.

ON SCREEN DISPLAY



Notes:

- Even when the power is turned off by using the POWER button, the COOLING FAN will continue to operate as long as the projector's internal temperature remains high (usually for about 2 min.). Do not disconnect the AC power cord plug, while the COOLING FAN is operating.
- If the projector is turned on immediately after it has been turned off, it may take a short while before the lamp is turned on. (During this period the POWER indicator lamp flashes green.)

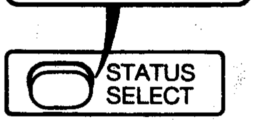
Operation Using the Controls on the Projector

- ■ When the RESET button is pressed, the projector picture adjustments are set to the factory preset positions. The picture can be adjusted by using the VIDEO ADJUSTMENT buttons located inside the door on the projector.
- ■ The adjustments can be memorized in the STATUS settings 1-5.

Adjusting the picture

1

Use the STATUS SELECT button to select the status you want to change.


STATUS
SELECT

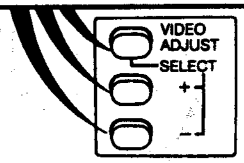
Each time the STATUS button is pressed, the display will change.

ON SCREEN DISPLAY

STATUS 1
[VIDEO STATUS 1]
↓
STATUS 2
[VIDEO STATUS 2]
↓
STATUS 3
[VIDEO STATUS 3]
↓
STATUS 4
[VIDEO STATUS 4]
↓
STATUS 5
[VIDEO STATUS 5]

2

Adjust the picture to your preference by using the VIDEO ADJUSTMENT SELECT button and SELECT (+)(−) buttons.

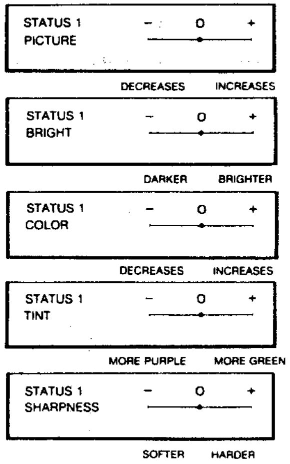

VIDEO
ADJUST
SELECT
+
−

Each time you press the VIDEO ADJUSTMENT SELECT button while the On Screen Display is visible; the item selected for adjustment will change.

[PICTURE]
↓
[BRIGHT]
↓
[COLOR]
↓
[TINT]
↓
[SHARPNESS]

When you press the SELECT (+)(−) buttons, the " ● " mark will move.

ON SCREEN DISPLAY



STATUS 1 − 0 +
PICTURE
DECREASES INCREASES

STATUS 1 − 0 +
BRIGHT
DARKER BRIGHTER

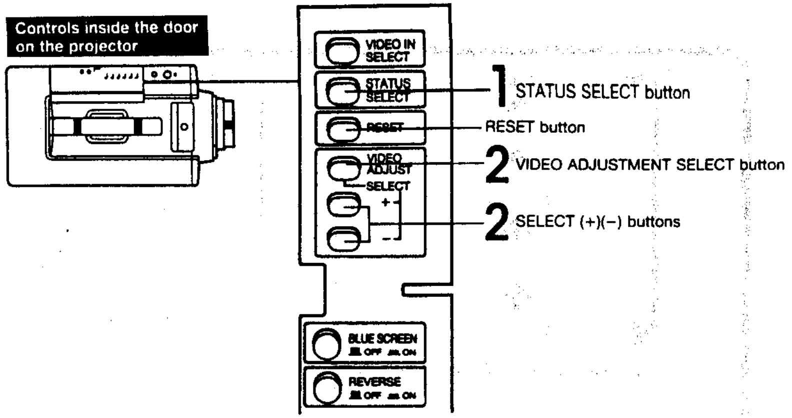
STATUS 1 − 0 +
COLOR
DECREASES INCREASES

STATUS 1 − 0 +
TINT
MORE PURPLE MORE GREEN

STATUS 1 − 0 +
SHARPNESS
SOFTER HARDER

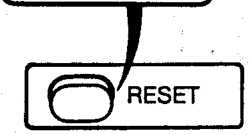
Note:
- •All video STATUS settings are set to the preset positions when the projector is shipped from the factory.

Controls inside the door on the projector


VIDEO IN SELECT
STATUS SELECT
RESET
VIDEO ADJUST SELECT
+
−
BLUE SCREEN ■OFF ▲ON
REVERSE ■OFF ▲ON
1 STATUS SELECT button
RESET button
2 VIDEO ADJUSTMENT SELECT button
2 SELECT (+)(−) buttons

Reset Mode

Press the RESET button



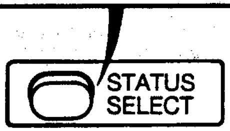
- ■The preset position (as when shipped from factory) is selected.

ON SCREEN DISPLAY

RESET

To select video status

Press the STATUS SELECT button to select the STATUS mode.


STATUS
SELECT

- ■"STATUS 2" is displayed on the screen and the color picture is automatically adjusted according to the conditions stored in status setting 2.

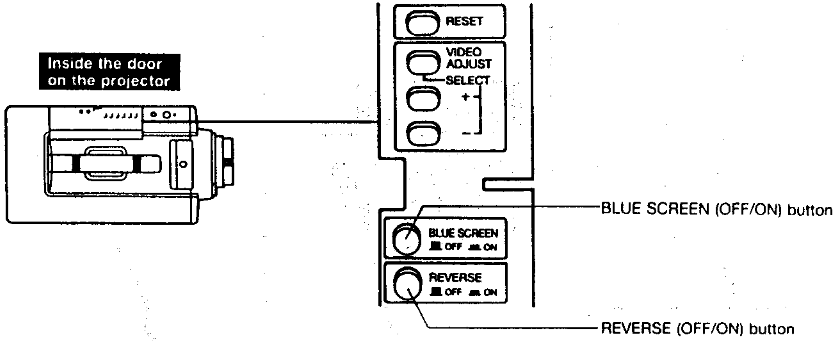
ON SCREEN DISPLAY

STATUS 2

(Example: Display when status mode 2 is selected)

Features Operated Using Controls on the Projector

- When there is no video signal input to the projector, the screen turns blue. This feature is called BLUE SCREEN.
  Use the BLUE SCREEN button to decided whether the blue screen function should be ON or OFF.


Inside the door on the projector
RESET
VIDEO ADJUST
SELECT
+
−
BLUE SCREEN
OFF ON
REVERSE
OFF ON
BLUE SCREEN (OFF/ON) button
REVERSE (OFF/ON) button

To activate the BLUE SCREEN function

BLUE SCREEN
OFF ON

Press the BLUE SCREEN button to the ON position.

- When the BLUE SCREEN button is set to ON, the screen turns blue when no signal is input via the terminal.

To cancel the BLUE SCREEN function

BLUE SCREEN
OFF ON

Press the BLUE SCREEN button to the OFF position.

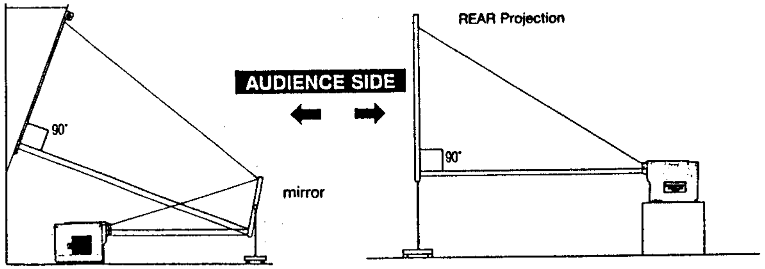
- When the BLUE SCREEN button is set to OFF, nothing is displayed when no signal is input via the terminal.

Note:

- If the BLUE SCREEN function is engaged for over 15 minutes, and no signal is input (the screen is blue), the power is automatically turned off.

- The projector allows the image to be reversed.
- By utilizing the reverse function the following set-ups become possible.

- By placing a mirror (normal flat type) in front of the zoom lens and using the reverse function, the image reflected from the mirror can be projected onto the screen.
- Rear projection, using a rear projection screen is also possible when the reverse function is used.


90°
mirror
AUDIENCE SIDE
REAR Projection
90°

Normal projection

Press the REVERSE button to the OFF position.

REVERSE
OFF ON

- The REVERSE function is OFF. (For normal use the button should be set to this position.)

Reversing the image

Press the REVERSE button to the ON position.

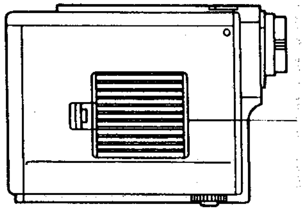
REVERSE
OFF ON

- When the REVERSE function is ON, the image is flipped to a mirror image of the input video signal.

Maintenance

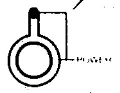
Air Filter

- Clean the air filter after every one hundred hours of use.
  The filter should be cleaned more frequently in very dusty areas.
- If the dirt can not be cleaned off the filter, it is time to replace the filter.
  Please consult your nearest Sharp dealer.



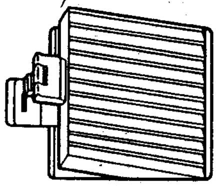
1 Turn OFF the POWER.

Set the POWER button to OFF.



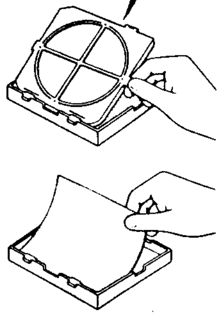
2 Remove the filter cover.

Slide the filter cover stopper in the direction of the arrow and pull up.



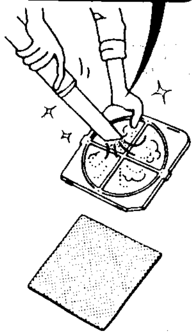
3 Remove the air filter.

Remove the air filter by grasping the projecting tab and pulling up, then remove the sponge filter.



4 Clean the air filter.

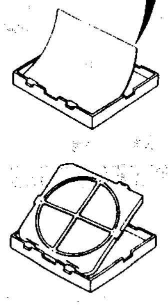
Clean the dirt off the air filter and the sponge filter with a vacuum cleaner.



- If the filter is very dirty, wash it with a neutral detergent dissolved in cool or lukewarm water, then leave it in the sun to dry

5 Replace the air filter.

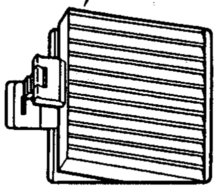
Replace the sponge filter and the air filter in the filter cover as before.



- Be careful not to bend the filter

6 Replace the filter cover.

Reattach the filter cover to the projector.



- Be sure that the filter cover is securely installed. If the cover is loose, the power may not come on

Note:

- Vacuum the outer side of the filter only.
  Vacuuming the inner side will damage the filtering capability of the air filter.

Maintenance Indicator

Lamp

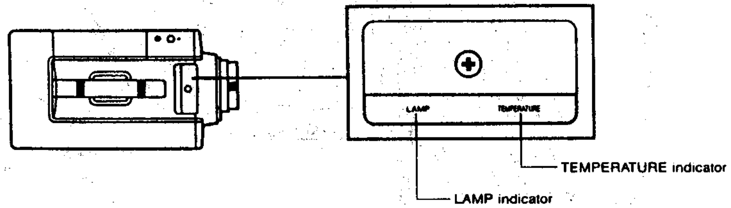
The lamp has an operating life.

- When the lamp is nearly burned out, the picture and color quality deteriorate. In this event, have the lamp replaced by qualified service personnel.

- Intense light hazard. Do not attempt to look into the aperture and lens while the projector is operating.

- ■ The warning lights on the projector to indicate problems inside the projector.
- ■ There are two warning lights; a TEMPERATURE indicator which warns that the projector is too hot, and a LAMP indicator which lets you know when to change the bulb.
- ■ If a problem occurs, either the TEMPERATURE indicator or the LAMP indicator will light up red, and the power will shut off. After turning off the power, follow the procedures written bellow.

TOP VIEW



Maintenance Indicator

If the TEMPERATURE indicator or the LAMP indicator lights up and the power turns off, the following problems are possible.

Note

The following examples;

Warning Indicator	Symptom	Problem	Possible Solution
TEMPERATURE indicator	The internal temperature is abnormally high.	• Blocked air intake.	• Relocate projector to in a proper location.
		• Clogged air filter.	• Clean the filter. (See page 30-31.)
		• Cooling fan breakdown. • Internal circuit failure.	• Take to your nearest retail outlet for repair.
LAMP indicator	The lamp does not light up.	• Burnt-out bulb. • Lamp circuit failure	• Take to your nearest retail outlet for repair.

Note: If the Temperature Monitor Indicator light comes on, after servicing, please wait until the projector has cooled down completely before turning the power back on. (At least 5 min.)

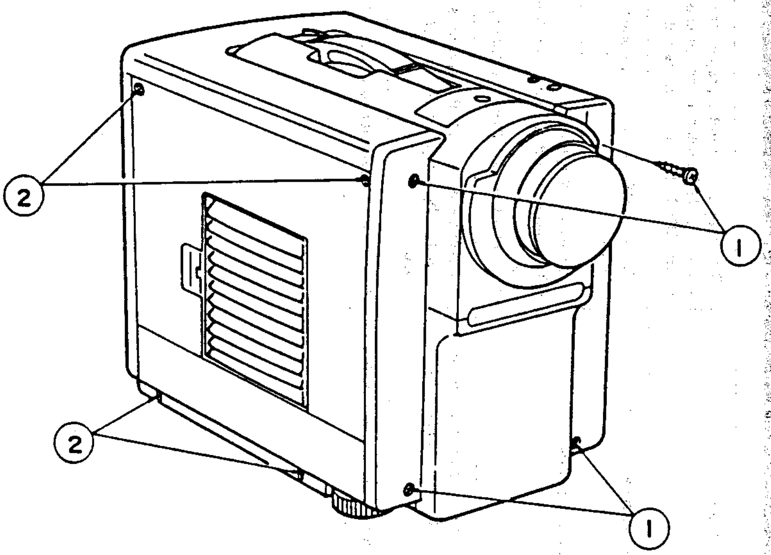
Before Calling for Service

No picture	• The projector is not plugged into the AC wall outlet. • The POWER switch is not pressed. • The BRIGHT (−) control is set to the minimum position.
Color is poor or faded	• The COLOR (+) and (−) controls are not properly adjusted.
Picture is blurred	• Adjust the FOCUS. • The projection distance is too long to allow for proper focus. • Clean the lens with lens cleaning paper.
An unusual sound is heard from cabinet occasionally	• If picture is normal, the sound is due to cabinet shrinkage caused by temperature changes. This will not affect operation.
Maintenance indicator lights	• Refer to "Maintenance indicator". (See page 19)

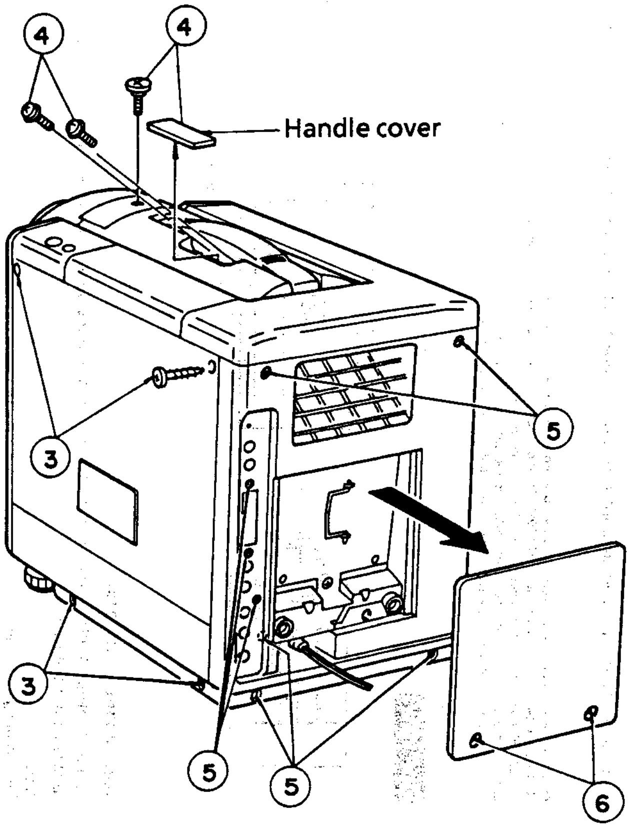
REMOVAL OF MAJOR PARTS

Removal of cabinet

1. Remove the 4 front cabinet fixing machine screws.
2. Remove the 4 left side cabinet fixing machine screws.

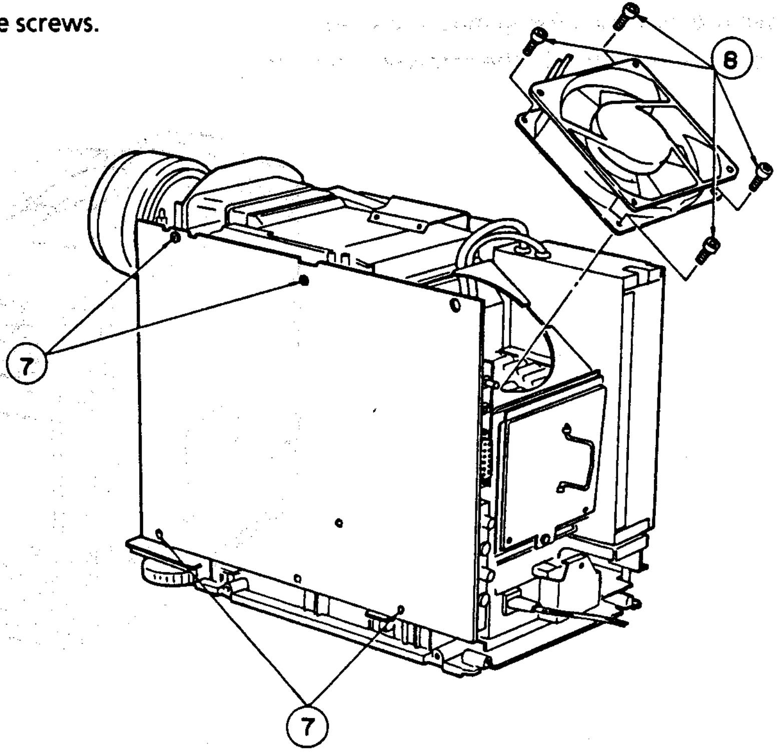


3. Remove the 4 right side cabinet fixing machine screws.
4. Remove the 3 top cabinet fixing machine screws, and remove the handle cover.
5. Remove the 8 rear cabinet fixing machine screws.
6. Remove the 2 lamp replacement panel fixing screws.



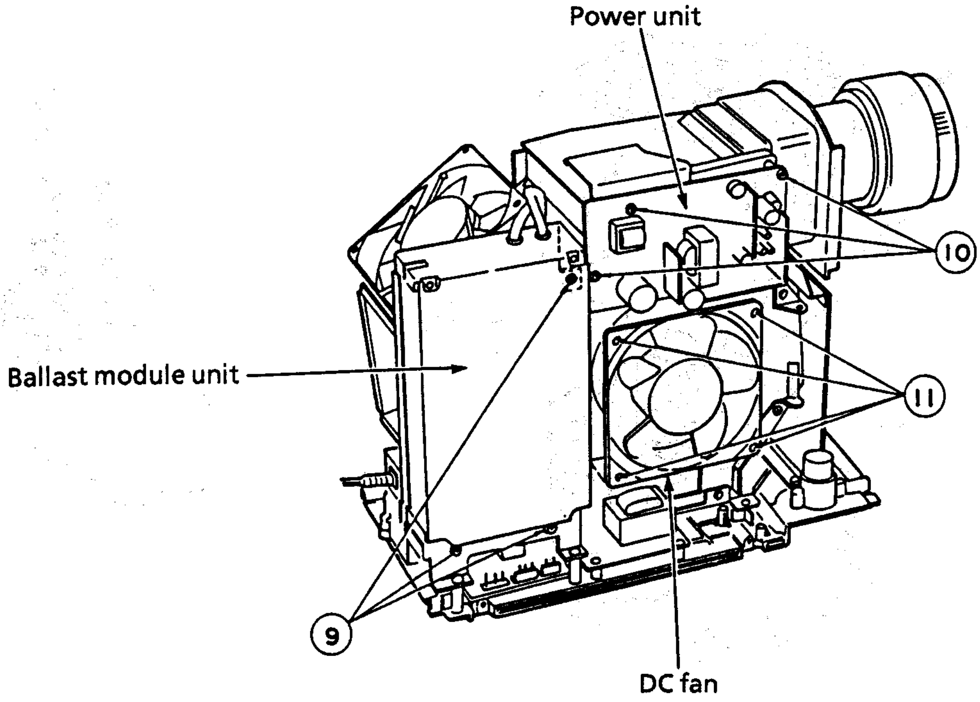
Removal of main PWB and rear fan

7. Remove the 4 main PWB fixing machine screws.
8. Remove the 4 AC fan fixing machine screws.



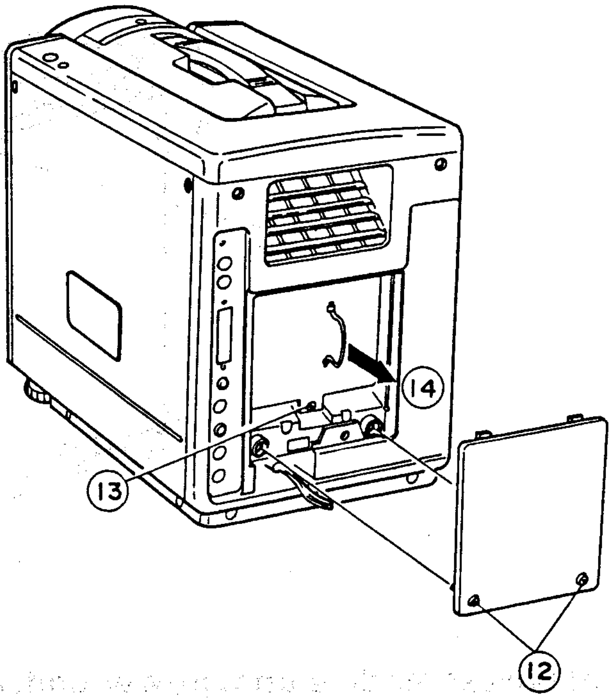
Removal of ballast module unit, power unit, and DC fan

9. Remove the 3 ballast module unit fixing machine screws.
10. Remove the 4 power unit fixing machine screws.
11. Remove the 4 DC fan fixing machine screws.


Power unit
10
Ballast module unit
11
9
DC fan

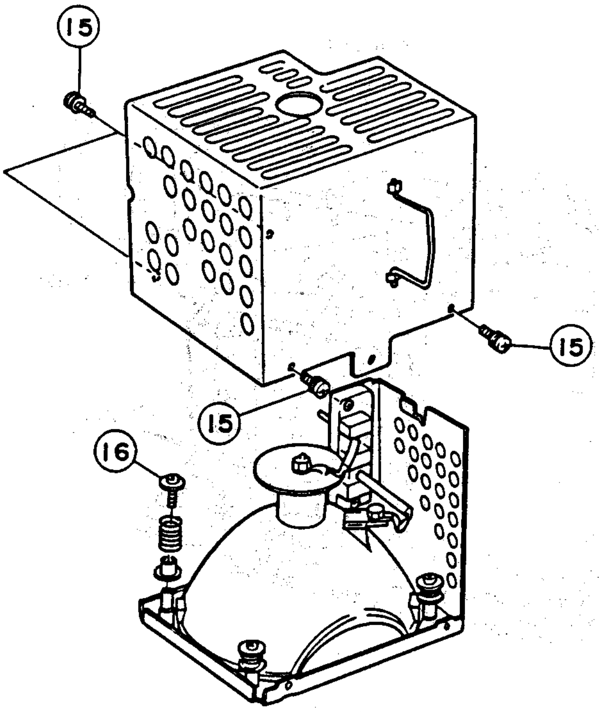
Removal of lamp box

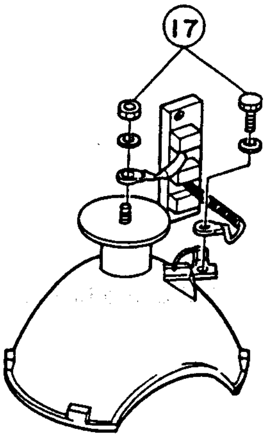
12. Remove the 2 lamp replacement panel fixing machine screws.
13. Remove the lamp box fixing machine screw.
14. Draw out the lamp box in the arrowed direction.



Replacement of lamp

15. Remove the 2 angle fixing machine screws of the lamp box.
16. Remove the 4 lamp fixing machine screws.
17. Remove the hexagonal nuts, machine screws, and washers in two lamp electrodes for replacing the lamp.





Removal of LCD panel

Procedure

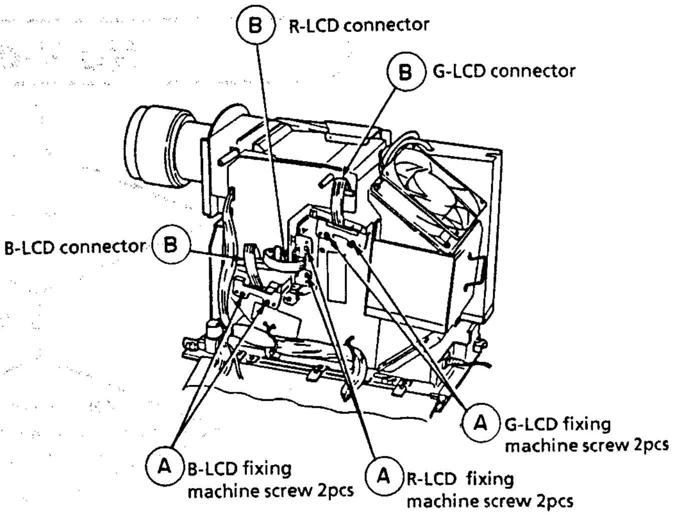
Ⓐ. Remove the 2 LCD panel fixing machine screws for each of R,G, and B.

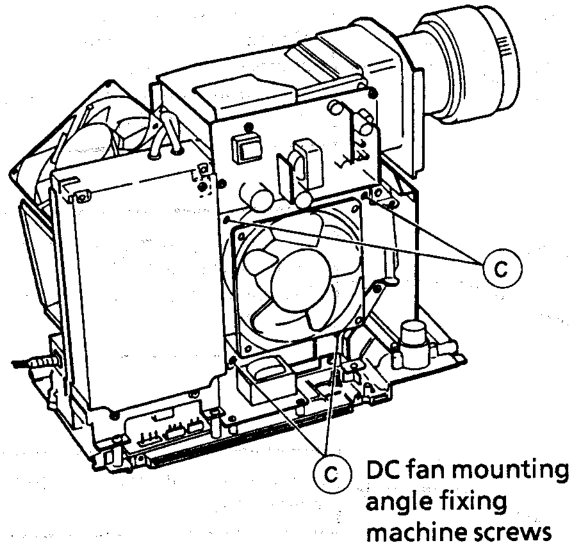
Ⓑ. Remove the LCD panel connector for each of R,G,and B.

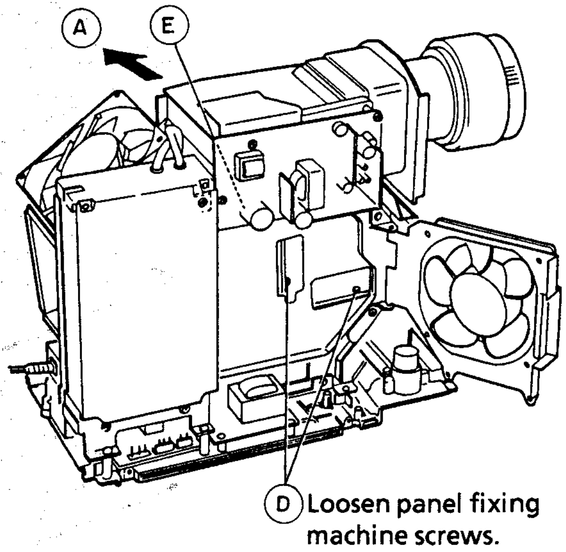
Ⓒ. Remove the 4 DC fan mounting angle fixing machine screws on the opposite side,and open the fan.

Ⓓ. Loosen the LCD panel fixing machine screw for R and B respectively, and slide to side A for removal.

Ⓔ. Insert a screwdriver through the rear side of power unit for G-LCD panel to loosen the machine screw.


Ⓑ R-LCD connector
Ⓑ G-LCD connector
B-LCD connector Ⓑ
Ⓐ G-LCD fixing machine screw 2pcs
Ⓐ B-LCD fixing machine screw 2pcs
Ⓐ R-LCD fixing machine screw 2pcs


Ⓒ
Ⓒ DC fan mounting angle fixing machine screws


Ⓐ
Ⓔ
Ⓓ Loosen panel fixing machine screws.

*Poor Picture due to Dust Mixing

Phenomenon

① Use in long time results in fine dotted or stained picture.

② Uneven color of Cyan, Magenta, and Yellow occurs in a part of screen.

Checking procedure

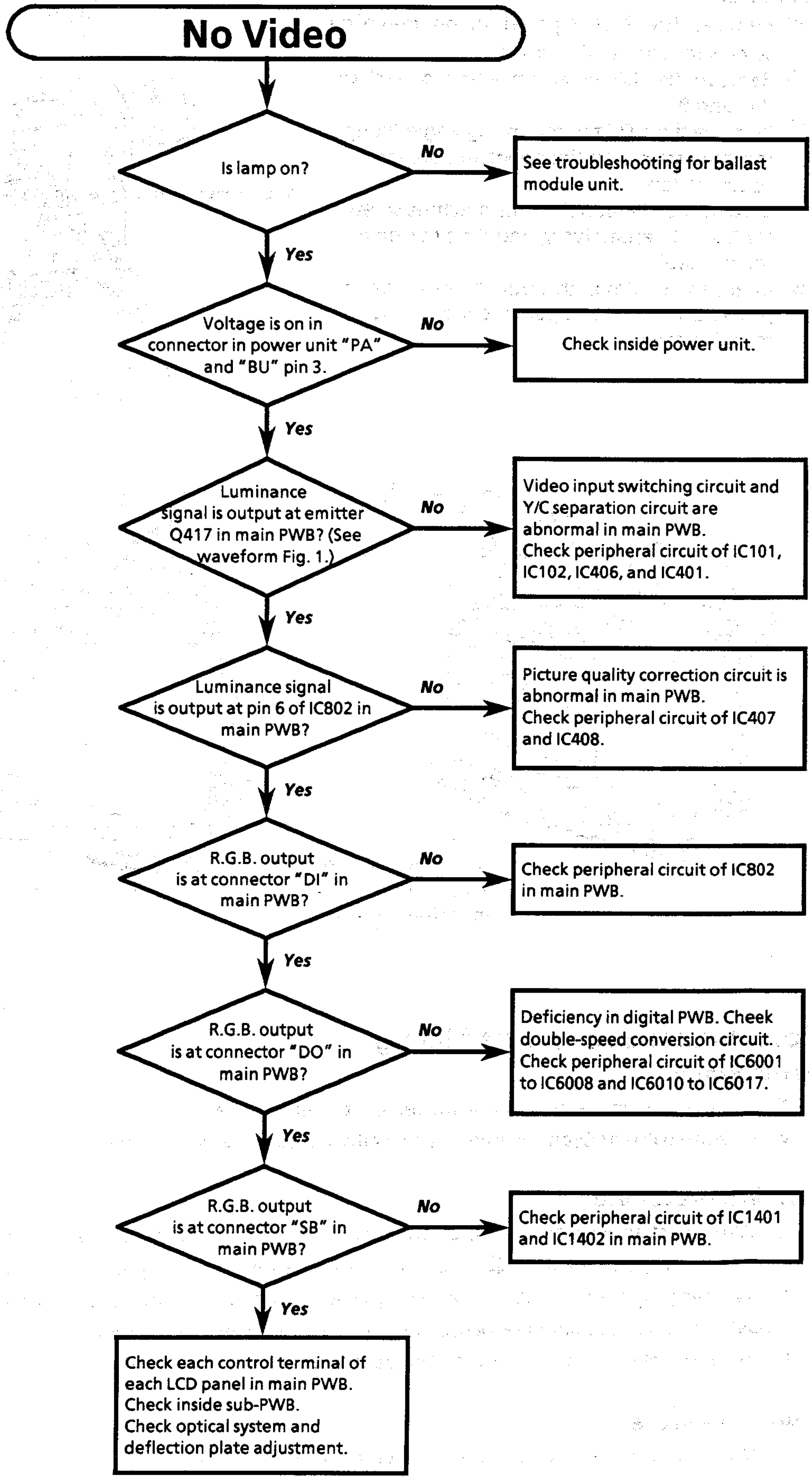
1) When dust adheres to each R, G, and B panel, the following symptons appear on the screen.,
   ① R-LCD panel→Cyan ②G-LCD panel→Magenta ③B-LCD panel→Yellow
2) By changing the focus, it can be distinguished to which of front and rear of the panel dust adheres.

- Dust in the front of panel→Focused on dust before the best focus point.
- Dust in the rear of panel →Focused on dust after the best focus point.

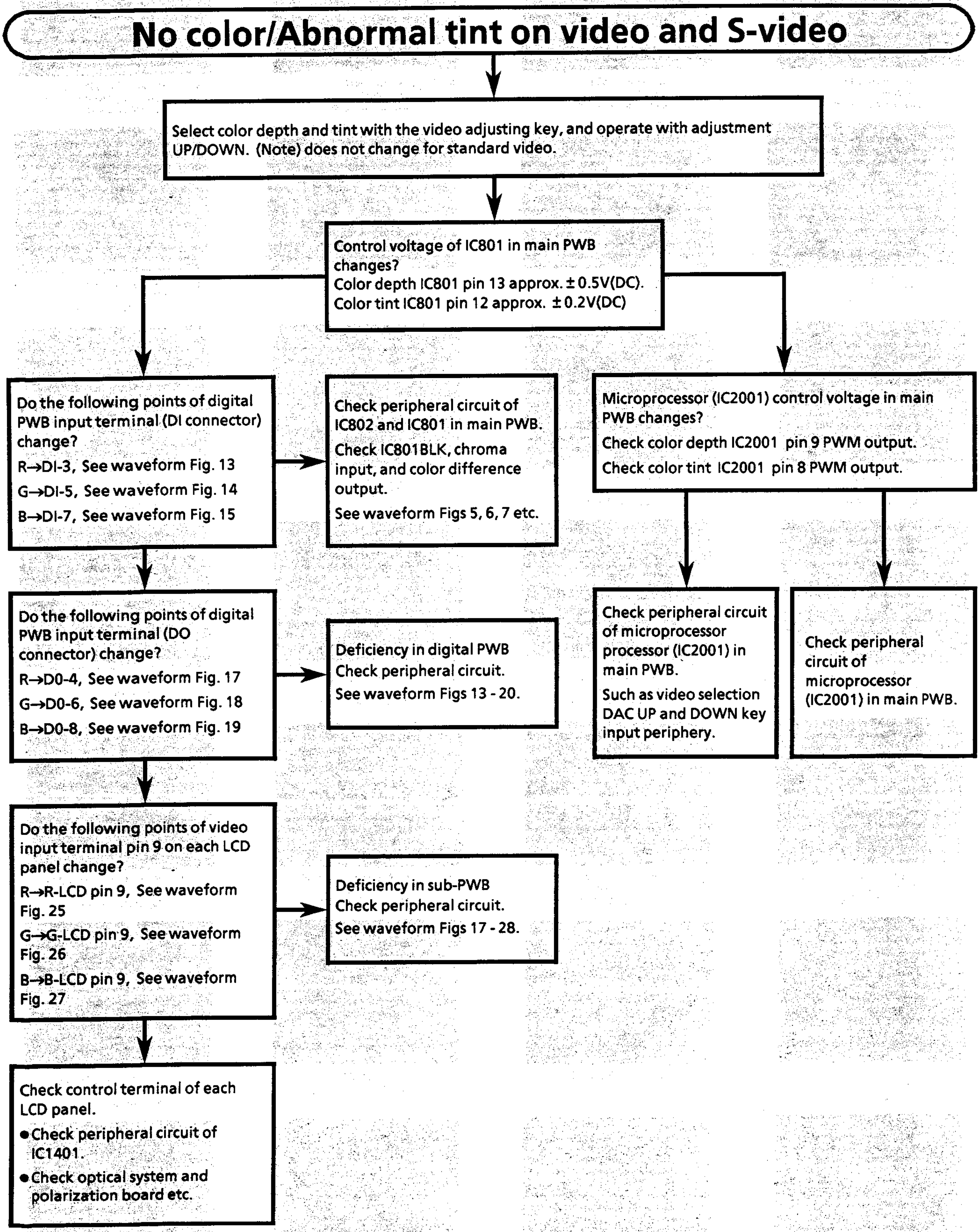
Countermeasure

Remove the dust adhered to the panel face with vacuum air,etc.

TROUBLE SHOOTING TABLE


No Video
Is lamp on?
No
See troubleshooting for ballast module unit.
Yes
Voltage is on in connector in power unit "PA" and "BU" pin 3.
No
Check inside power unit.
Yes
Luminance signal is output at emitter Q417 in main PWB? (See waveform Fig. 1.)
No
Video input switching circuit and Y/C separation circuit are abnormal in main PWB. Check peripheral circuit of IC101, IC102, IC406, and IC401.
Yes
Luminance signal is output at pin 6 of IC802 in main PWB?
No
Picture quality correction circuit is abnormal in main PWB. Check peripheral circuit of IC407 and IC408.
Yes
R.G.B. output is at connector "DI" in main PWB?
No
Check peripheral circuit of IC802 in main PWB.
Yes
R.G.B. output is at connector "DO" in main PWB?
No
Deficiency in digital PWB. Cheek double-speed conversion circuit. Check peripheral circuit of IC6001 to IC6008 and IC6010 to IC6017.
Yes
R.G.B. output is at connector "SB" in main PWB?
No
Check peripheral circuit of IC1401 and IC1402 in main PWB.
Yes
Check each control terminal of each LCD panel in main PWB. Check inside sub-PWB. Check optical system and deflection plate adjustment.

TROUBLE SHOOTING TABLE (Continued)



No color/Abnormal tint on video and S-video

Select color depth and tint with the video adjusting key, and operate with adjustment UP/DOWN. (Note) does not change for standard video.

Control voltage of IC801 in main PWB changes?
Color depth IC801 pin 13 approx. ± 0.5V(DC).
Color tint IC801 pin 12 approx. ± 0.2V(DC)

Do the following points of digital PWB input terminal (DI connector) change?
R→DI-3, See waveform Fig. 13
G→DI-5, See waveform Fig. 14
B→DI-7, See waveform Fig. 15

Check peripheral circuit of IC802 and IC801 in main PWB.
Check IC801BLK, chroma input, and color difference output.
See waveform Figs 5, 6, 7 etc.

Microprocessor (IC2001) control voltage in main PWB changes?
Check color depth IC2001 pin 9 PWM output.
Check color tint IC2001 pin 8 PWM output.

Do the following points of digital PWB input terminal (DO connector) change?
R→D0-4, See waveform Fig. 17
G→D0-6, See waveform Fig. 18
B→D0-8, See waveform Fig. 19

Deficiency in digital PWB
Check peripheral circuit.
See waveform Figs 13 - 20.

Check peripheral circuit of microprocessor processor (IC2001) in main PWB.
Such as video selection DAC UP and DOWN key input periphery.

Check peripheral circuit of microprocessor (IC2001) in main PWB.

Do the following points of video input terminal pin 9 on each LCD panel change?
R→R-LCD pin 9, See waveform Fig. 25
G→G-LCD pin 9, See waveform Fig. 26
B→B-LCD pin 9, See waveform Fig. 27

Deficiency in sub-PWB
Check peripheral circuit.
See waveform Figs 17 - 28.

Check control terminal of each LCD panel.
- Check peripheral circuit of IC1401.
- Check optical system and polarization board etc.

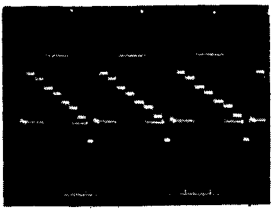


Fig. 1. Emitter of Q417
Y signal
20μs/div 0.5V/div

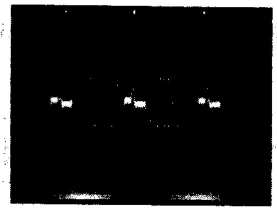


Fig. 2. Pin 31 of IC801
C signal
20μs/div 50mV/div

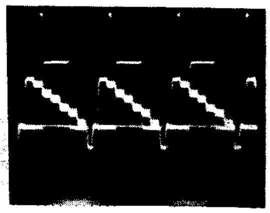


Fig. 3. Pin 4 of IC801
Sync input
20μs/div 0.5V/div

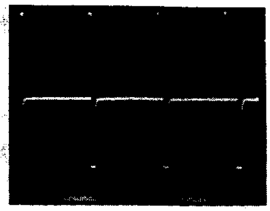


Fig. 4. Pin 28 of IC801,
Sync judgment output
20μs/div 2V/div

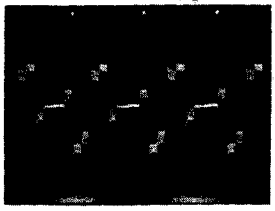


Fig. 5. Pin 20 of IC801
R-Y
20μs/div 1V/div

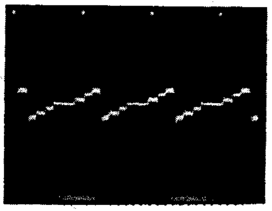


Fig. 6. Pin 21 of IC801
G-Y
20μs/div 1V/div

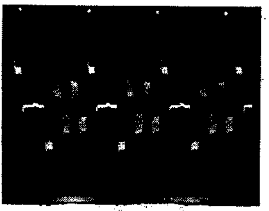


Fig. 7. Pin 22 of IC801
B-Y
20μs/div 1V/div

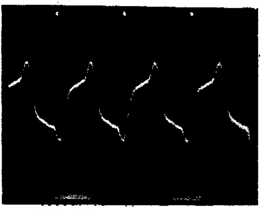


Fig. 8. Emitter of Q803
Fsc
0.1μs/div 0.2V/div

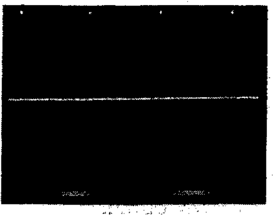


Fig. 9. Pin 7 of IC602
Blanking
20μs/div 0.2V/div

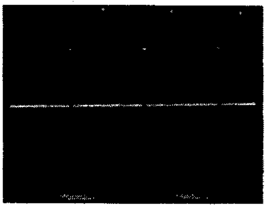


Fig. 10. Pin 6 of IC603
Clamp
20μs/div 0.2V/div

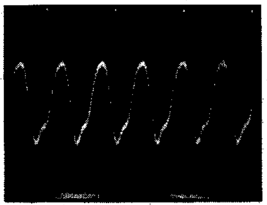


Fig. 11. Pin 6 of IC6009
28MHz, OSC OUT
20μs/div 1V/div

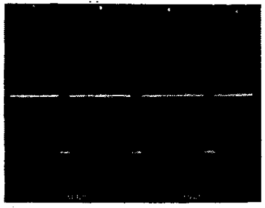


Fig. 12. Pin 7 of IC604
V-Sync
5ms/div 1V/div

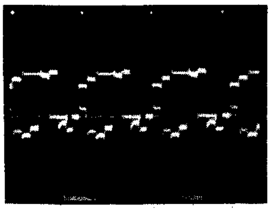


Fig. 13. Pin 3 of connector DI
RED input
20μs/div 0.5V/div

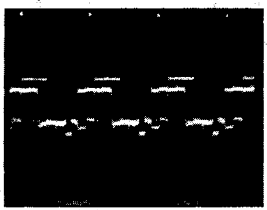


Fig. 14. Pin 5 of connector DI
GREEN input
20μs/div 0.5V/div

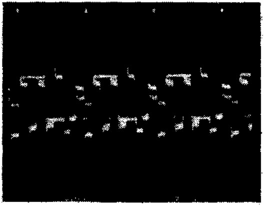


Fig. 15. Pin 7 of connector DI
BLUE input
20μs/div 0.5V/div

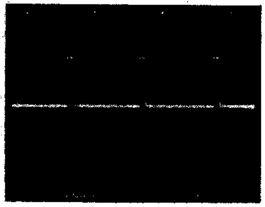


Fig. 16. Pin 1 of connector DI
H-Sync input
20μs/div 2V/div

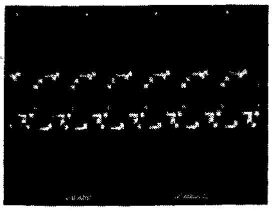


Fig. 17. Pin 4 of connector DO
RED output
20μs/div 0.5V/div

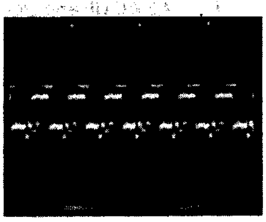


Fig. 18. Pin 6 of connector DO
GREEN output
20μs/div 0.5V/div

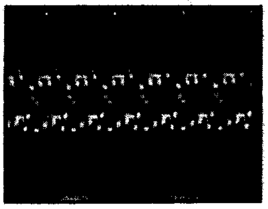


Fig. 19. Pin 8 of connector DO
BLUE output
20μs/div 0.5V/div

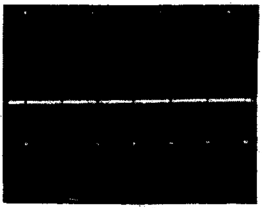


Fig. 20. Pin 1 of connector DO
2H sync output
20μs/div 2V/div

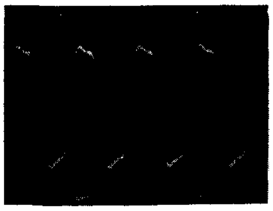


Fig. 21. Pin 2 of GREEN LCD
CKI
20ns/div 1V/div

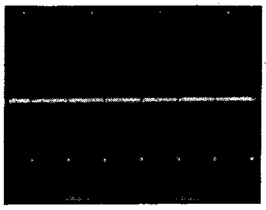


Fig. 22. Pin 4 of GREEN LCD
RES
20μs/div 2V/div

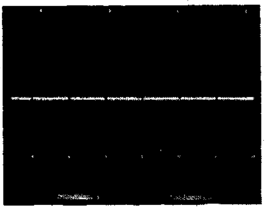


Fig. 23. Pin 9 of IC1001
HSYO
20μs/div 2V/div

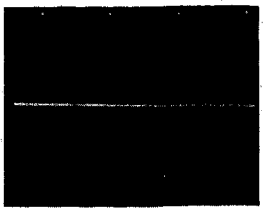


Fig. 24. Pin 14 of GREEN LCD
LCD VSYNC
5ms/div 2V/div

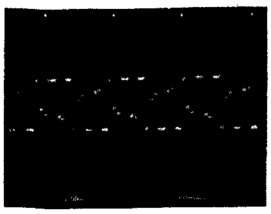


Fig. 25. Pin 3 of connector SB
RED-VIDEO
20μs/div 1V/div

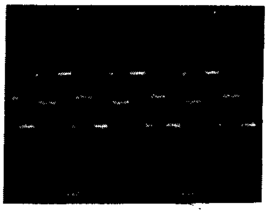


Fig. 26. Pin 5 of connector SB
GREEN-VIDEO
20μs/div 1V/div

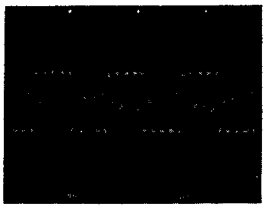


Fig. 27. Pin 1 of connector SB
BLUE-VIDEO
20μs/div 1V/div

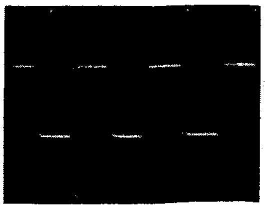
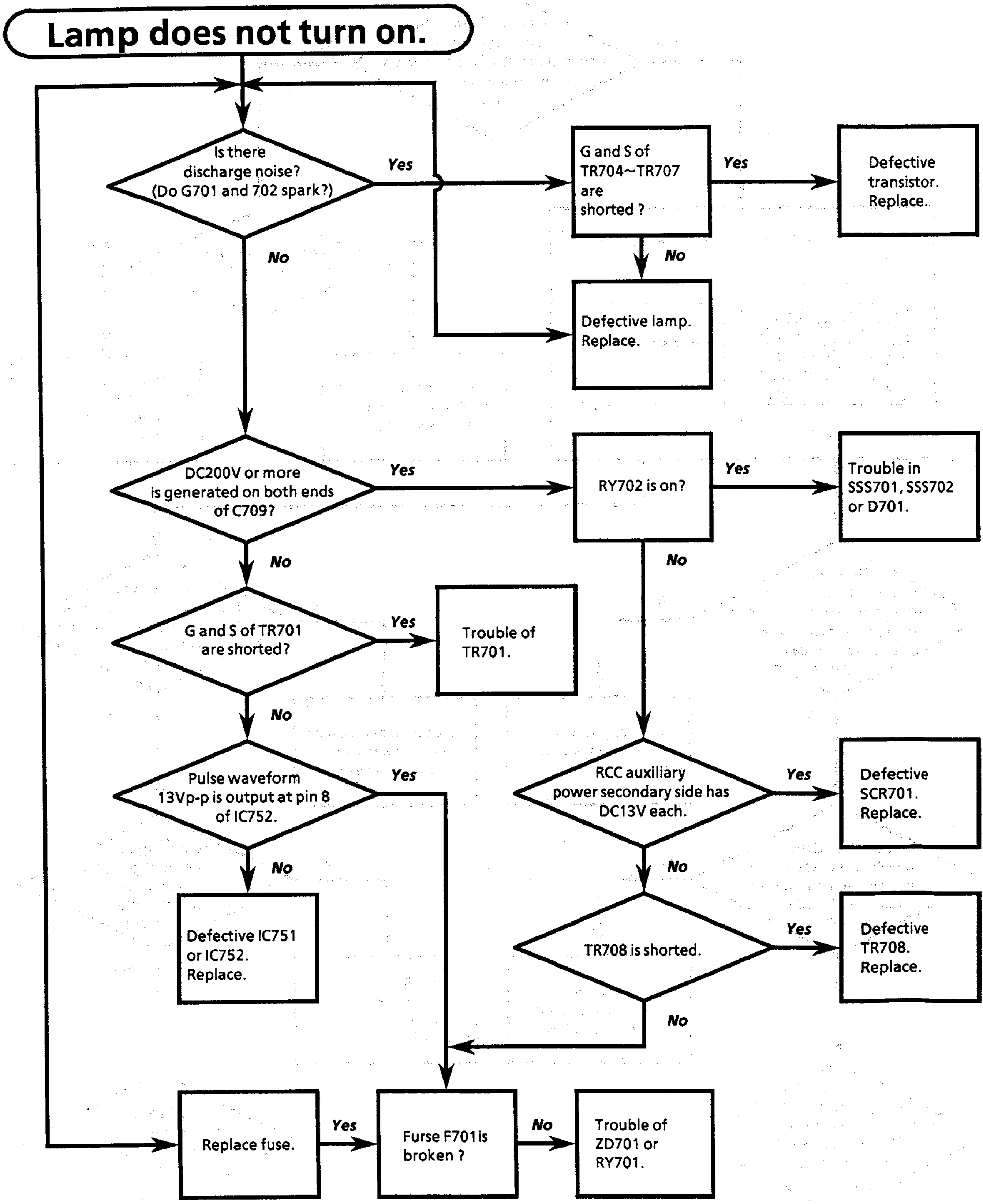


Fig. 28. Pin 13 of GREEN LCD
LCD COM
20μs/div 2V/div

TROUBLE SHOOTING TABLE (Continued)

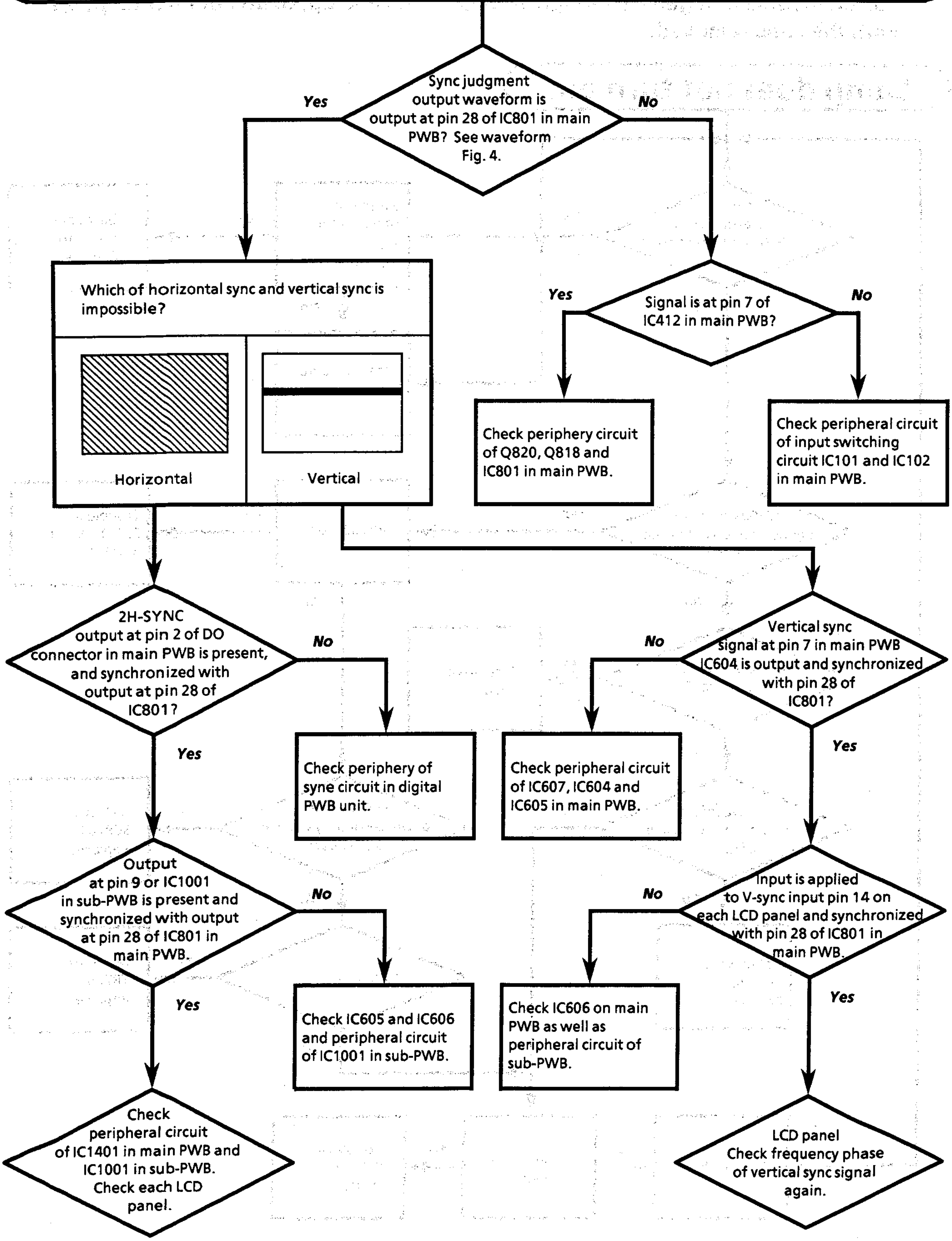
■ Troubleshooting for ballast module unit

Ballast module unit generates high voltage in starting up, so do not turn on power with the lamp removed.


Lamp does not turn on.
Is there discharge noise? (Do G701 and 702 spark?)
Yes
No
G and S of TR704~TR707 are shorted ?
Yes
No
Defective transistor. Replace.
Defective lamp. Replace.
DC200V or more is generated on both ends of C709?
Yes
No
RY702 is on?
Yes
No
Trouble in SSS701, SSS702 or D701.
G and S of TR701 are shorted?
Yes
No
Trouble of TR701.
Pulse waveform 13Vp-p is output at pin 8 of IC752.
Yes
No
Defective IC751 or IC752. Replace.
RCC auxiliary power secondary side has DC13V each.
Yes
No
Defective SCR701. Replace.
TR708 is shorted.
Yes
No
Defective TR708. Replace.
Replace fuse.
Yes
Furse F701is broken ?
No
Trouble of ZD701 or RY701.

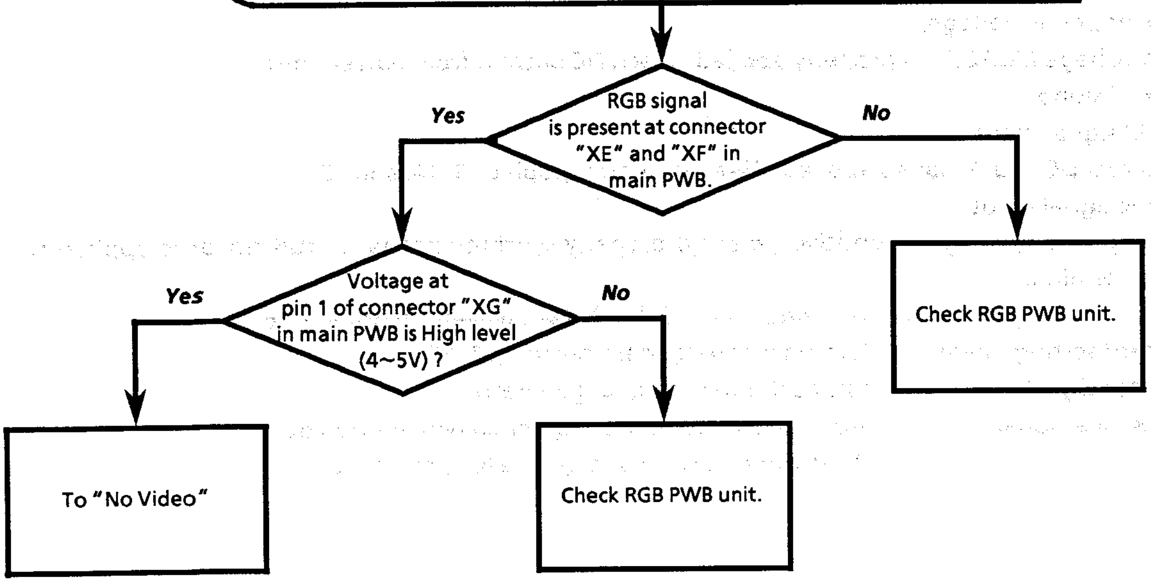
TROUBLE SHOOTING TABLE (Continued)

Video and S-video cannot be synchronized.

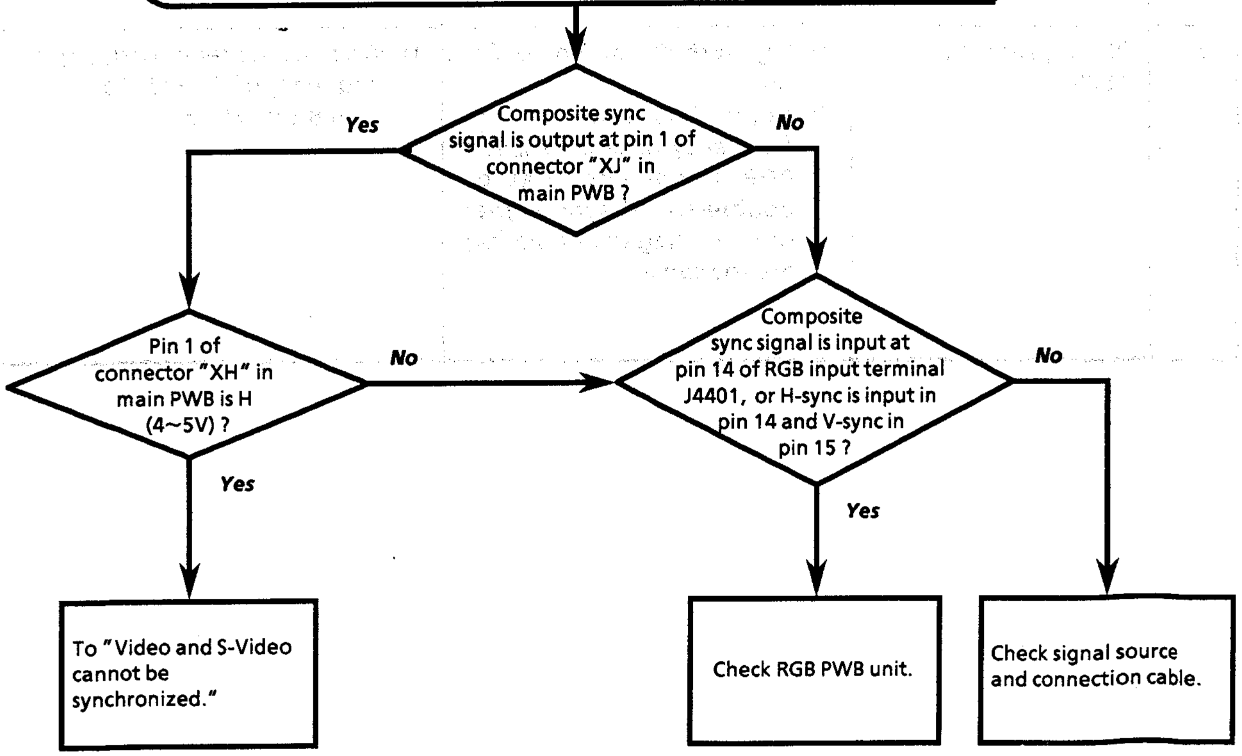

Sync judgment output waveform is output at pin 28 of IC801 in main PWB? See waveform Fig. 4.
Yes
No
Which of horizontal sync and vertical sync is impossible?
Horizontal
Vertical
Yes
Signal is at pin 7 of IC412 in main PWB?
No
Check periphery circuit of Q820, Q818 and IC801 in main PWB.
Check peripheral circuit of input switching circuit IC101 and IC102 in main PWB.
2H-SYNC output at pin 2 of DO connector in main PWB is present, and synchronized with output at pin 28 of IC801?
No
Yes
Check periphery of syne circuit in digital PWB unit.
Vertical sync signal at pin 7 in main PWB IC604 is output and synchronized with pin 28 of IC801?
No
Yes
Check peripheral circuit of IC607, IC604 and IC605 in main PWB.
Output at pin 9 or IC1001 in sub-PWB is present and synchronized with output at pin 28 of IC801 in main PWB.
No
Yes
Check IC605 and IC606 and peripheral circuit of IC1001 in sub-PWB.
Input is applied to V-sync input pin 14 on each LCD panel and synchronized with pin 28 of IC801 in main PWB.
No
Yes
Check IC606 on main PWB as well as peripheral circuit of sub-PWB.
Check peripheral circuit of IC1401 in main PWB and IC1001 in sub-PWB. Check each LCD panel.
LCD panel Check frequency phase of vertical sync signal again.

TROUBLE SHOOTING TABLE (Continued)

RGB input is not displayed.


RGB signal is present at connector "XE" and "XF" in main PWB.
Yes
No
Check RGB PWB unit.
Voltage at pin 1 of connector "XG" in main PWB is High level (4~5V) ?
Yes
No
To "No Video"
Check RGB PWB unit.

RGB input cannot be synchronized.


Composite sync signal is output at pin 1 of connector "XJ" in main PWB ?
Yes
No
Pin 1 of connector "XH" in main PWB is H (4~5V) ?
No
Yes
Composite sync signal is input at pin 14 of RGB input terminal J4401, or H-sync is input in pin 14 and V-sync in pin 15 ?
No
Yes
To "Video and S-Video cannot be synchronized."
Check RGB PWB unit.
Check signal source and connection cable.

ADJUSTMENT OF VARIOUS PARTS

Preparation

(1) Check of power voltage
Rated voltage (AC120V) is properly applied, (Each DC output, from power unit)

(2) Check of signal

1) RGB signal input
Correct DC and AC lavels applied. (See waveform graphic 13, 14, and 15.)

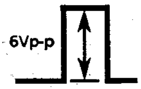
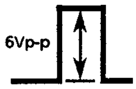
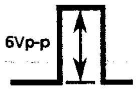
2) Sync signal input
Composite sync signal (positive polarity) properly synchronized with RGB signal is applied to the terminal.
Also input signal should be standard (15.734kHz). (See waveform graphic 16.)

● Standard setting mode:	Turn on video standard button (S2015).
● Color bar signal:	Input color bar of signal generator.
● Monoscope signal:	Use a pattern generator equipped with monoscope mode. Monoscope pattern and generator (reference)

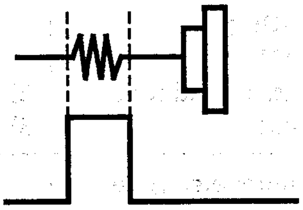
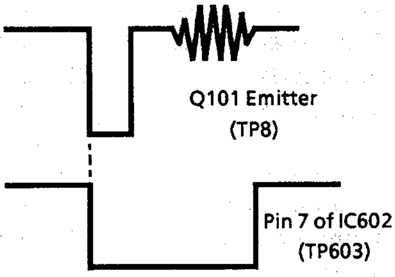
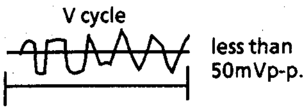
Adjustment of digital substarate

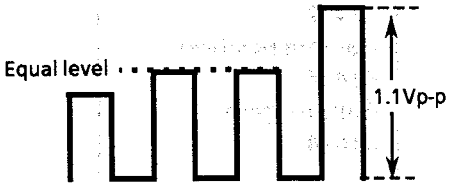
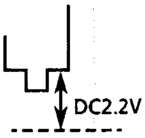
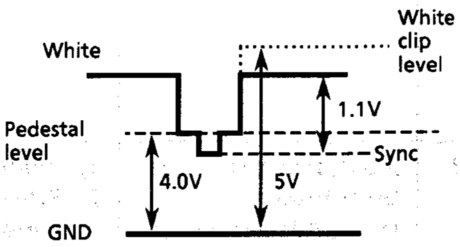
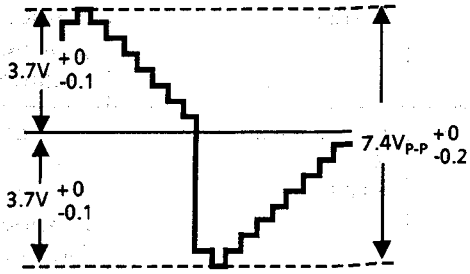
	Item	Adjustment condition	Adjustment procedure
1	Reference voltage R6020	Connect a digital voltmeter between TP-6001 and GND.	Adjust at 3.0 ± 0.1V with R6020.
2	PLL adjustment T6001	1) Lay SW6001 down to ON side. 2) Adjust T6001 so that the frequency of double-speed RGB signal and that of double-speed sync signal (2H · · · Negative polarity) are the same.	1) When a counter is used, adjust the frequency of TP-6003 to 31.468 ± 0.06kHz.

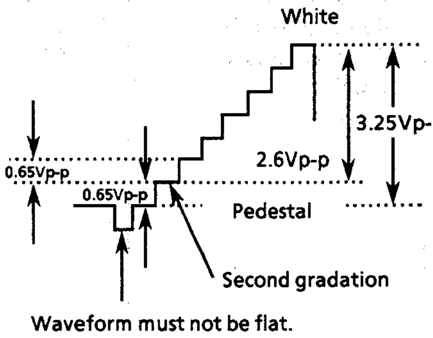
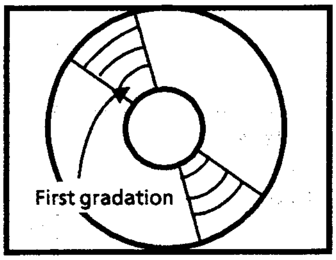
Adjustment of controller substrate

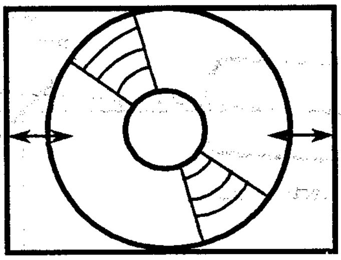
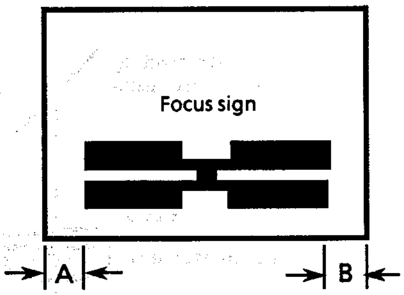
	Item	Adjustment condition	Adjustment procedure
1 . 2 . 3	Phase level R1014 H-HOLD L1001 Phase adjustment R1001	1) Short pin 2 of SC connector (TP1004) and GND (TP1005) to perform free run. 2) Input monoscope signal. 3) Remove short circuit of 1).	Adjust R1014 so that the voltage at TP1003 (pin 32 of IC1001) is 2.2V ± 0.05V. Turn L1001 so that the picture stands. Adjust H center on the picture with R1001.
4	Counter electrode, Amplitude adjustment R (R1483)	1) Input monoscope signal. 2) Connect an oscilloscope to pin 13 (TP1405) of R-LCD panel.	Turn R1483 to adjust counter electrode amplitude waveform at 6.0Vp-p ± 0.1Vp-p. 
5	Counter electrode, Amplitude adjustment G (R1495)	1) Input monoscope signal. 2) Connect an oscilloscope to pin 13 (TP1406) of G-LCD panel.	Turn R1495 to adjust counter electrode amplitude waveform at 6.0Vp-p ± 0.1Vp-p. 
6	Counter electrode, Amplitude adjustment B (R1489)	1) Input monoscope signal. 2) Connect an oscilloscope to pin 13 of B-LCD panel. (TP1404)	Turn R1489 to adjust counter electrode amplitude waveform at 6.0Vp-p ± 0.1Vp-p. 
7	Counter electrode, Amplitude adjustment R (R1486)	1) Input monoscope signal. 2) Place a light shielding plate in B and G LCD panel to obtain single R color.	Turn R1486 to obtain maximum contrast.
8	Counter electrode, Amplitude adjustment G (R1498)	1) Input monoscope signal. 2) Place a light shielding plate in B and R LCD panel to obtain single G color.	Turn R1498 to obtain maximum contrast.
9	Counter electrode, Amplitude adjustment B (R1492)	1) Input monoscope signal. 2) Place a light shielding plate in G and R LCD panel to obtain single B color.	Turn R1492 to obtain maximum contrast.
10	R-CLK bias R1069	1) Input monoscope signal. 2) Place a light shielding plate in B and G LCD panel to obtain single R color.	Turn R1069 to adjust DC voltage at R connector pin 2 (TP1011) of LCD at 2.3V, and ensure that there is no noise on screen.
11	G-LCK bias R1071	1) Input monoscope signal. 2) Place a light shielding plate in B and R LCD panel to obtain single G color.	Turn R1070 to adjust DC voltage at G connector pin 2 (TP1012) of LCD at 2.3V, and ensure that there is no noise on screen.
12	B-CLK bias R1071	1) Input monoscope signal. 2) Place a light shielding plate in G and R LCD panel to obtain single B color.	Turn R1071 to adjust DC voltage at B connector pin 2 (TP1013) of LCD at 2.3V, and ensure that there is no noise.

Adjustment of main substrate

	Item	Adjustment condition	Adjustment procedure
1	Clamp pulse phase adjustment R614	1) Input color bar signal. 2) Connect an oscilloscope to TP604 (pin 6 of IC603) and TP804 (pin 31 of IC801).	Turn R614 to adjust the clamp pulse phase to burst signal phase. 
2	H-BLK phase adjustment R609	1) Input color bar signal. 2) Connect an oscilloscope to TP603 (pin 7 of IC602) and TP8 (emitter of Q101).	Turn R609 to adjust the waveform phase as belows. 
3	APC adjustment R820	1) Turn off colors in the manner belows. 2) Short the base of Q420 to GND. 3) Connect a color bar signal generator, turn off color burst SW, and input color bar signal with color burst signal sampled out. 4) Connect resistance 5.6k ohms between pin 15 (TP2403) of IC801 and 9V power line.	Turn R820 to set a point where barbar pole disappears.
4	DCF adjustment R2458 R2461 R2472 C2476 R2493 R2499	1) Input color bar signal. 2) Connect an oscilloscope to TP401 (pin 1 or IC403) and 402 (pin 3 of IC403) and set "ADD" mode of on oscilloscope. 3) Connect an oscilloscope to TP402 (pin 3 of IC403) and 403 (pin 5 of IC403) and set "ADD" mode of on oscilloscope. 4) Connect an oscilloscope to TP404 (emitter of Q466).	Turn R2458 and R2461 to adjust the waveform at minimum. Turn R2472 and C2476 to adjust the waveform at minimum. Turn R2493 and R2499 to adjust chroma level on Y waveform at minimum.
5	Vertical noise adjustment R2417 T2401	1) Input color bar signal. 2) Connect an oscilloscope between pin 6 (TP2403) of IC2401 and GND.	 Turn R2417 and T2401 by turns to adjust the amplitude of waveform at minimum.

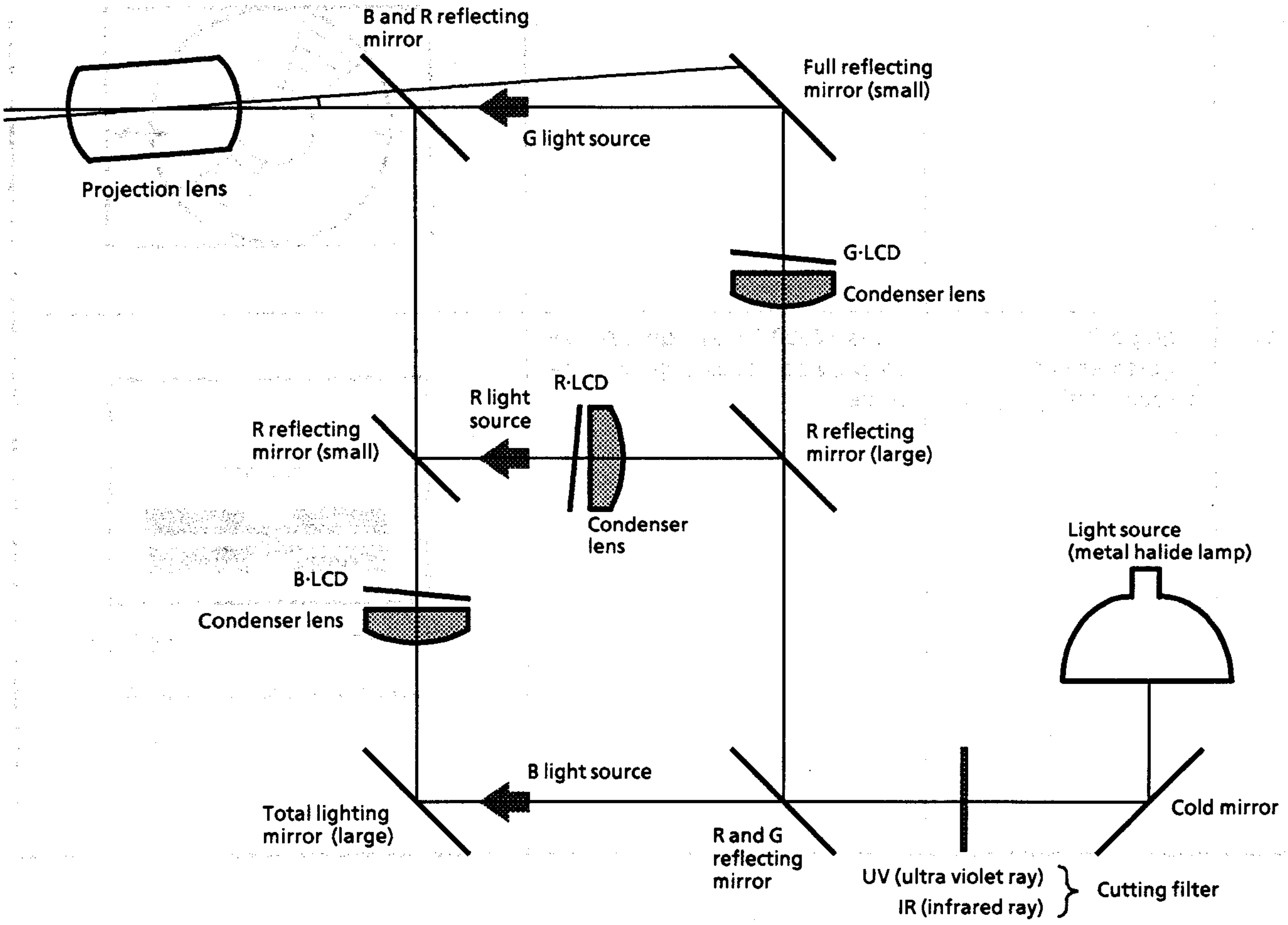
	Item	Adjustment condition	Adjustment procedure
6	Tint adjustment-1 R827	1) Input color bar signal through S input terminal. 2) Set the "RESET" mode. (Turn on S2015.) 3) Connect an oscilloscope to TP806 (pin 22 of IC801) and observe B-Y waveform.	Turn R827 to set the waveform below. Turn R822 to adjust the amplitude of waveform at 1.1Vp-p ± 0.1Vp-p. 
7	Adjustment of color depth R822		
8	Tint adjustment-2 R675	1) Input color bar signal (composite). 2) Set the "RESET" mode. (pin 22 of IC801) 3) Conneact an oscilloscope to TP806 (pin 22 of IC801).	Turn R675 to adjust the same as tint adjustment-1.
9	AGC adjustment R1603	1) Input color bar signal. 2) Connect an oscilloscope to TP51 (pin 7 of IC1601).	Adjust DC level in pedestal part of Y signal waveform at DC2.2V ± 0.05V with R1603. 
10	Video adjustment R855 (pedestal) R857 (contrast) R2820	1) Input color bar signal. 2) Connect an oscilloscope to TP1 (pin 5 of DI connector).	1) Turn R855 to adjust pedestal level of waveform at 4V ± 0.1V. 2) Turn R857 to adjust video amplitude (pedestal-white) at 1.3Vp-p. 3) Turn R2820 to adjust white clip level at 5V ± 0.1V. 4) Turn R857 to adjust sync-white level at 1.1Vp-p ± 0.05Vp-p.  White clip level White 1.1V Pedestal level Sync 4.0V 5V GND
11	Clip level R1532 R1534	1) Connect an oscilloscope to TP4 (pin 5 of SB connector). (G-OUT) 2) Turn R1414 to adjust SYNC-SYNC at 8V ± 0.2V. Turn R1532 and R1534 to adjust so that upper and lower clip level is 3.7 + 0, − 0.1V respectively off the center of output waveform.	Turn R1532 to adjust clip level of upper waveform at 3.7 + 0, − 0.1V. Also adjust clip level of lower waveform at 3.7 + 0, − 1V with R1534. Adjust so that upper and lower waveforms are equally in contact with the limit line, and set total clip level at 7.4 + 0, − 2Vp-p. Then return R1414 approxjmately to the center. 

	Item	Adjustment condition	Adjustment procedure
12	Sub bright R2178 Sub contrast R1472 Gamma position R1426 Gamma gain R1424	1) Input 10 gradation (color off) signal. 2) Set the "RESET" mode.	1) Set R1426 at maximum. 2) Connect a digital voltmeter to TP53 (pin 47 of IC1401). 3) Adjust digital voltmeter value at DC3.5V ± 0.1V with R1424. 4) Connect an oscilloscope to TP4 (SB connector pin 5). 5) Adjust the amplitude of pedestal-white at 2.6V with R1472. At this time, lower part of waveform must not be in contact with the limit line. If it is in contact, correct with R1414. 6) By turning R1426, adjust with R2178 so that the second gradation of waveform does not change. 7) Adjust to the waveform below with R1426 and R1424. 8) When adjustment is over, remove signal measurement device.  White 3.25Vp-p 2.6Vp-p 0.65Vp-p 0.65Vp-p Pedestal Second gradation Waveform must not be flat.
13	Adjustment of brightness (R, G, B interlock sub bias) R1414	1) Input monoscope signal. 2) Place a light shielding plate in R and B LCD panel to obtain single G color.	 Adjust with R1414 at a point where the second gradation of monoscope pattern is darkened.
14	White balance-(1) R1435 R1421	Connect an oscilloscope to SB1 (TP2) and SB5 (TP4) of connector (conversion) and provide an waveform of ADD (addition) mode.	Turn R1435 and R1421 to adjust waveform at minimum.
15	White balance-(2) R1417 R1437	Connect an oscilloscope to SB3 (TP3) and SB5 (TP4) of connector (conversion) and provide an waveform of ADD (addition) mode.	Turn R1417 and R1437 to adjust waveform at minimum.

	Item	Adjustment condition	Adjustment procedure
16	H-CENTER R1001	1) Input monoscope signal.	Adjust to provide overscan equal on both sides of the screen. 
17	Sign position adjustment of on screen display T2001	Press S2008 focus sign SW key to provide focus sign on the screen.	 Adjust with T2001 so that A = B

OPTICAL SYSTEM ADJUSTMENT

Base of Optical System Adjustment


B and R reflecting mirror
Full reflecting mirror (small)
G light source
Projection lens
G·LCD
Condenser lens
R·LCD
R light source
R reflecting mirror (small)
R reflecting mirror (large)
Condenser lens
Light source (metal halide lamp)
B·LCD
Condenser lens
B light source
Total lighting mirror (large)
R and G reflecting mirror
Cold mirror
UV (ultra violet ray)
IR (infrared ray)
Cutting filter

1. Optical axis alignment

R: Light source → R.G reflecting mirror → R reflecting mirror (large) → R reflecting mirror (small) → B.R. reflecting mirror → Projection lens
B: Light source → Full reflecting mirror (large) → B.R. reflecting mirror → Projection lens
G: Light source → R.G. reflecting mirror → Full reflecting mirror (small) → Projection lens

As shown in the figure, optical axis alignment is to adjust the angle of each color reflecting mirror. The light is a parallel ray after passing through the condenser lens. Therefore, the mirror after condenser lens requires high precision, and a small mirror is adopted in construction to meet the condition. Here, G ray is used as a basis.

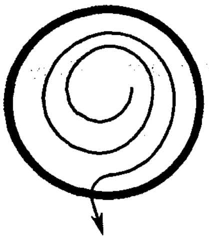
2. LCD parallelism setting

R: R.LCD unit → R reflecting mirror (small) → B.R.reflecting mirror → Projection lens
G: G.LCD unit → Full reflecting mirror (small) → Projection lens
B: B.LCD unit → B.R. reflecting mirror → Projection lens

Distance from projection lens is important since it gives influence on screen angle and focus. Here, if parallelism setting only is to be adjusted, every mirror is already adjusted in optical axis alignment, therefore LCD unit is to be solely adjusted for each color.

Cleaner of Lens and Mirror

1. Lens cleaner



※ Cleaner liquid
It should consist of alcohol and ether, Change mixing ratio according to the temperature. As a standard, cleaner should dry as soon as it is applied. It dries up sooner when it contains more ether.

※ Cleaner procedure
Bleached cotton washed is recommended. Commercial cleaner paper is also recommended. Hold the lens between forefinger and thumb using bleached cotton moistned with liquid, and bring the dust from the center to the periphery as turning the lens, and soop out at the edge. Do not hold coated face strongly.

2. Cleaner of mirror

A mirror is evaporized, therefore do not hold strongly. Little dirt should be dissolved with alcohol and wiped with a dry cloth. Do not use ether mixed liquid.

3. Point

Larger influence by contamination is given to both sides of LCD unit screen and LCD side of condenser lens, therefore such faces require fine attention.

Adjustment after replacement of LCD (Liquid Crystal Panel)

LCD deflection plate adjustment

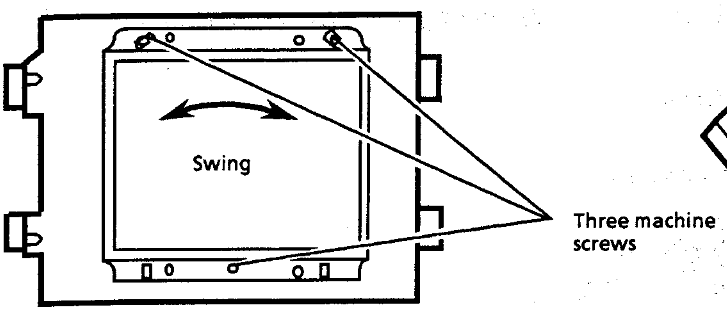
1. Tool and instrument required

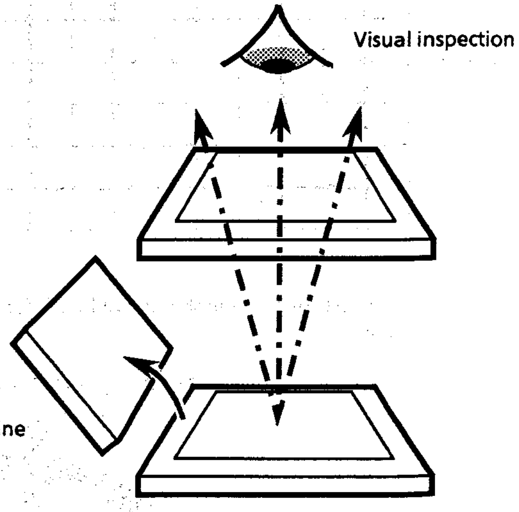
1) Pattern generator.
2) Plane light source (example: Backlight section of liquid crystal TV)

2. Adjustment position

3. Adjustment procedure

1) Operate the body and input a black signal in video input.
2) Loosen three machine screws for the deflection plate.





Remove LCD TV panel and use backlight as a light source.

Search for the position of eyes where the light is darkest, and fix there. Then apply the following adjustment.

3) Apply light source and swing the deflection plate to right and left and fix in the darkest position.
4) Tighten up the screws.

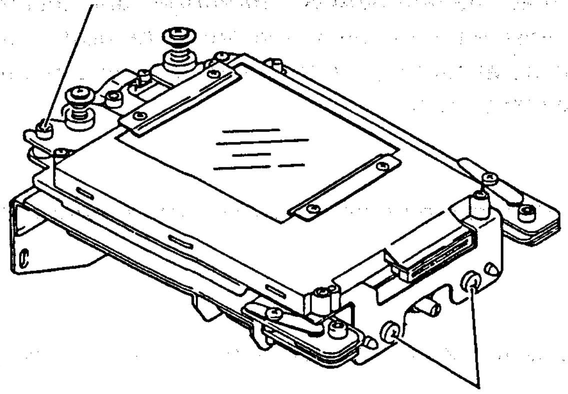
X and Y adjustment

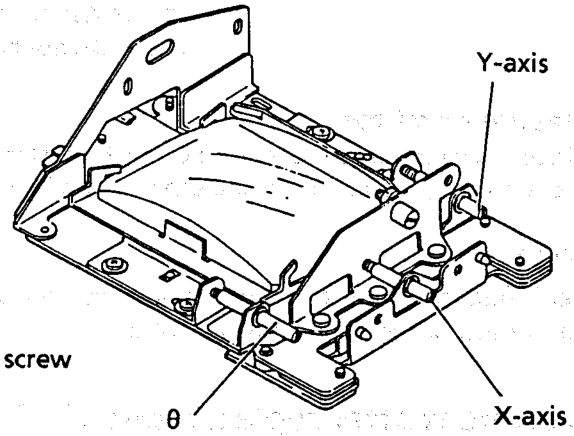
1. Tools

1) Light shielding plate (hard proccssed thick paper to shield light source)
2) Standard lens

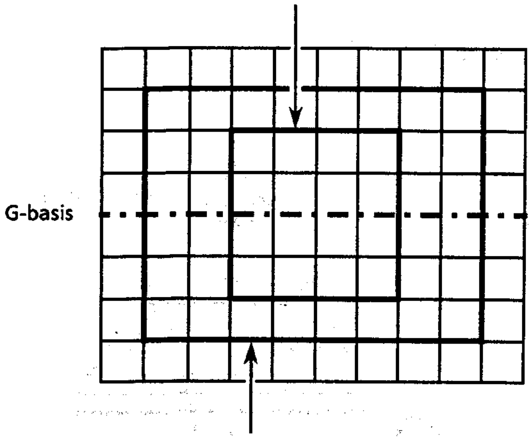
Adjustment principle

Upper and lower position of R and B picture is adjusted on the basis of G. Construction is shown below, where LCD receiver moves in X and Y direction independent of the base.


M plate fixing machine screw
M plate fixing machine screw


Y-axis
θ
X-axis

Complete accordance is required up to the central second block.



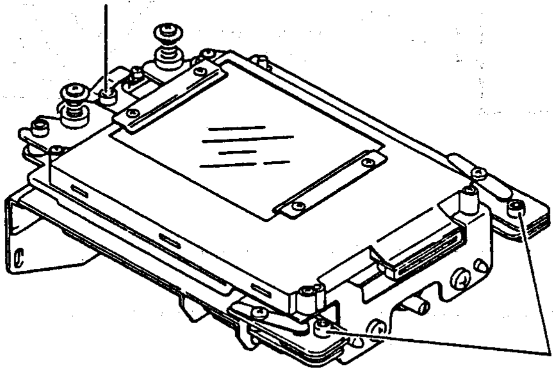
Outer peripheral line should not be off for every color.

2. Adjusting points

1) Apply R and B upon G on its basis.
2) Projection pattern up to central second block must accord completely.
3) Outer peripheral line should not be off for every color.

Preparation before adjustment

1) Loosen three hexagonal machine screws in total on both sides of LCD unit base.
2) Input grid signal in video input.


Base fixing machine screw
Base fixing machine screw

3. Adjustment

R-G alignment

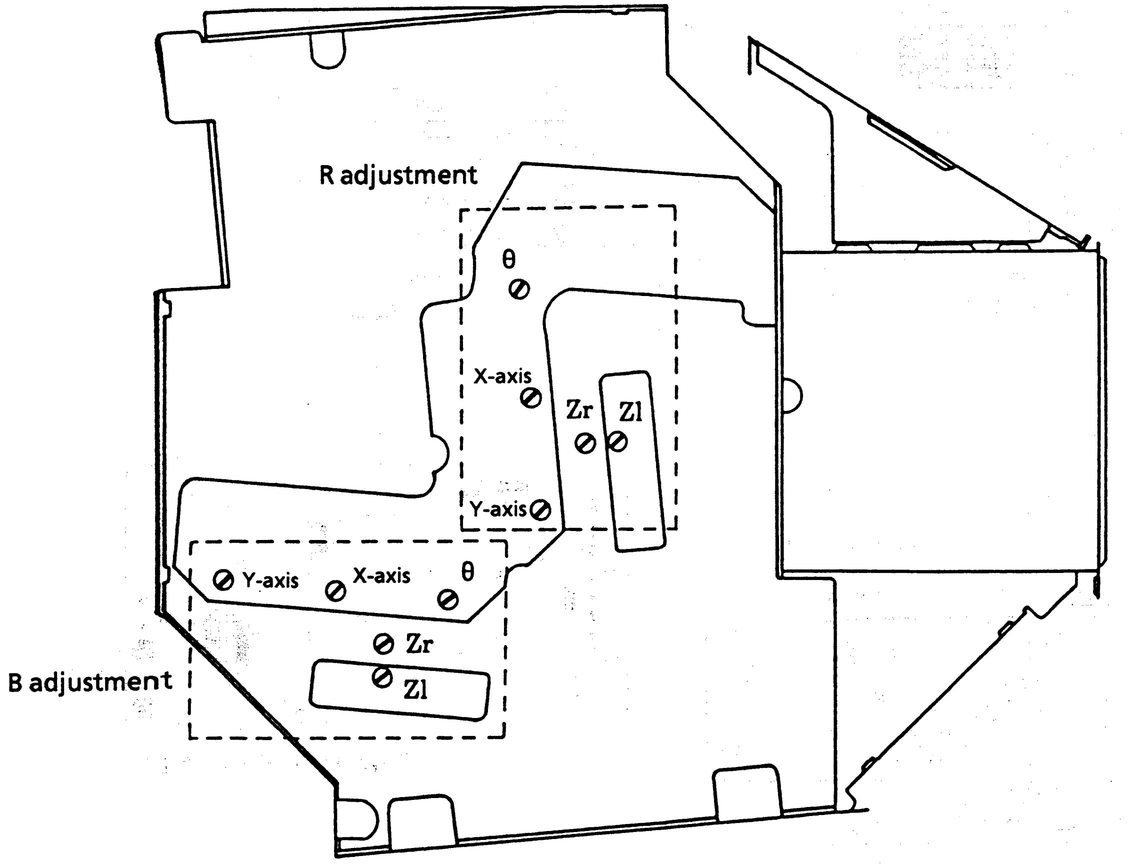
1) Place a light shielding plate in B-LCD part. (B light source cut out)
   Apply R block upon G block. Adjust X axis in horizontal direction. Adjust Y axis in vertical direction.

Adjust inclination by θ

B-G alignment

1) Place a light shielding plate in R-LCD part. (B light source cut out)
   Apply B block upon G block. Adjust X axis in horizontal direction. Adjust Y axis in vertical direction.

Adjust inclination by θ


R adjustment
θ
X-axis
Zr
Zl
Y-axis
Y-axis
X-axis
θ
Zr
Zl
B adjustment

RED and BLUE

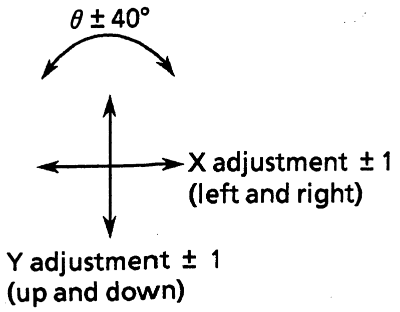
Rotation	Clockwise	Counter-clockwise
X-axis	Shift to the left	Shift to the right

RED

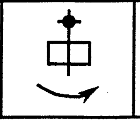
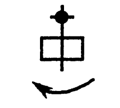
Rotation	Clockwise	Counter-clockwise
Y-axis	Down	Up

BLUE

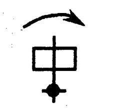
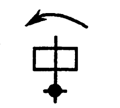
Rotation	Clockwise	Counter-clockwise
Y-axis	Up	Down


θ ± 40°
X adjustment ± 1
(left and right)
Y adjustment ± 1
(up and down)

RED

Rotation	Clockwise	Counter-clockwise
θ		

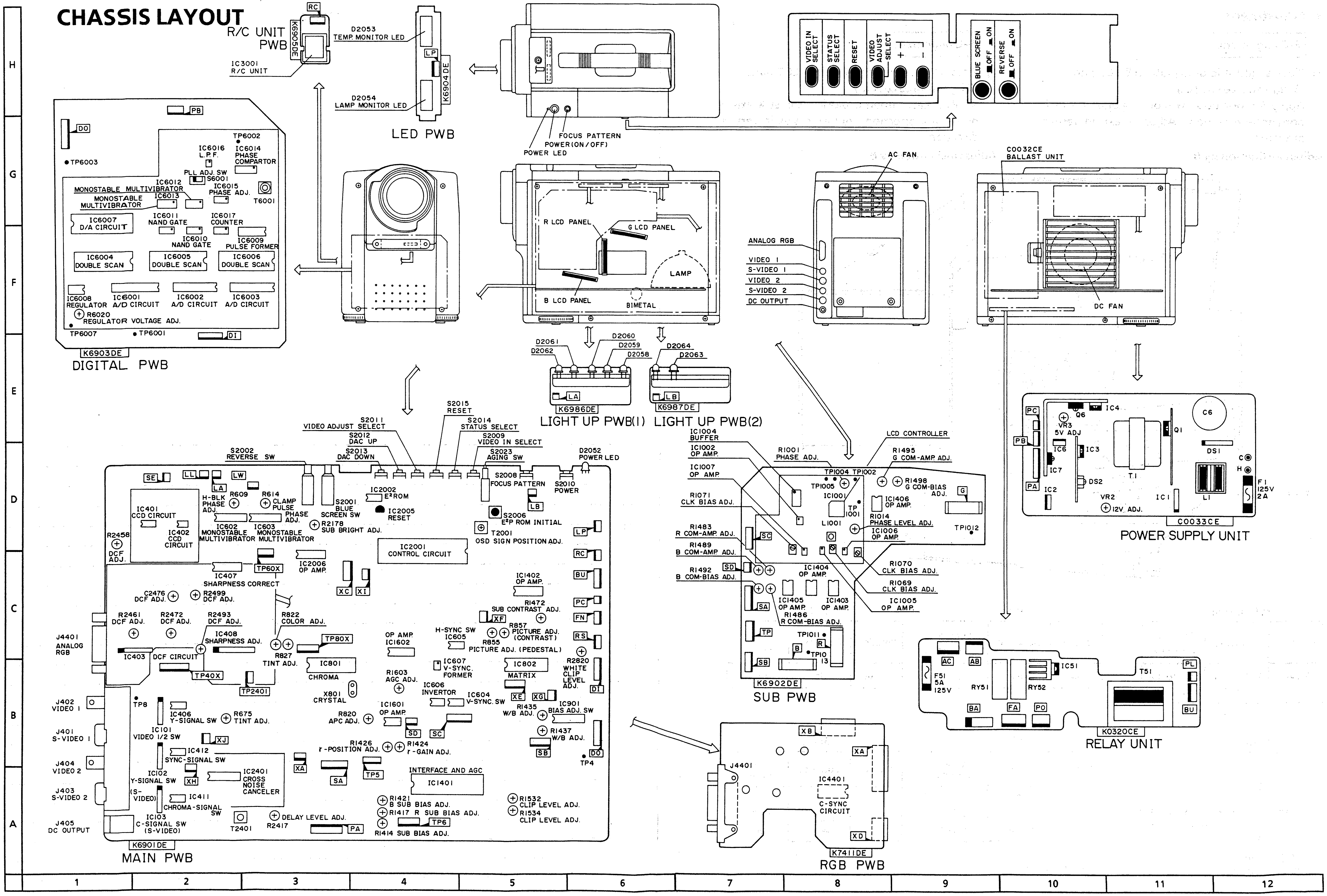
BLUE

Rotation	Clockwise	Counter-clockwise
θ		

GREEN: Fixed

Memo

CHASSIS LAYOUT


R/C UNIT PWB
RC
K6905DE
IC3001 R/C UNIT
D2053 TEMP. MONITOR LED
LP
K6904DE
D2054 LAMP MONITOR LED
LED PWB
FOCUS PATTERN
POWER(ON/OFF)
POWER LED
VIDEO IN SELECT
STATUS SELECT
RESET
VIDEO ADJUST SELECT
+
-
BLUE SCREEN ■ OFF ▬ ON
REVERSE ■ OFF ▬ ON
PB
DO
TP6002
TP6003
IC6016 L.P.F.
IC6014 PHASE COMPARTOR
PLL ADJ. SW S6001
IC6012 MONOSTABLE MULTIVIBRATOR
IC6013 MONOSTABLE MULTIVIBRATOR
IC6015 PHASE ADJ.
T6001
IC6007 D/A CIRCUIT
IC6011 NAND GATE
IC6017 COUNTER
IC6010 NAND GATE
IC6009 PULSE FORMER
IC6004 DOUBLE SCAN
IC6005 DOUBLE SCAN
IC6006 DOUBLE SCAN
IC6008 REGULATOR
IC6001 A/D CIRCUIT
IC6002 A/D CIRCUIT
IC6003 A/D CIRCUIT
R6020 REGULATOR VOLTAGE ADJ.
TP6007
TP6001
DI
K6903DE
DIGITAL PWB
R LCD PANEL
G LCD PANEL
LAMP
B LCD PANEL
BIMETAL
AC FAN
ANALOG RGB
VIDEO 1
S-VIDEO 1
VIDEO 2
S-VIDEO 2
DC OUTPUT
C0032CE BALLAST UNIT
DC FAN
D2061
D2062
D2060
D2059
D2058
D2064
D2063
LA
K6986DE
LIGHT UP PWB(1)
LB
K6987DE
LIGHT UP PWB(2)
PC
PB
PA
IC4
C6
Q6
VR3 5V ADJ
IC6
IC3
Q1
DS1
IC7
IC2
DS2
T1
VR2
IC1
L1
12V ADJ.
C
H
F1 125V 2A
C0033CE
POWER SUPPLY UNIT
S2015 RESET
S2011 VIDEO ADJUST SELECT
S2014 STATUS SELECT
S2012 DAC UP
S2009 VIDEO IN SELECT
S2013 DAC DOWN
S2023 AGING SW
S2002 REVERSE SW
D2052 POWER LED
S2008 FOCUS PATTERN
S2010 POWER
SE
LL
LW
LA
H-BLK PHASE ADJ.
R609
R614 CLAMP PULSE PHASE ADJ.
S2001 BLUE SCREEN SW
IC2002 E²ROM
IC2005 RESET
LB
S2006 E²P ROM INITIAL
IC401 CCD CIRCUIT
IC402 CCD CIRCUIT
IC602 MONOSTABLE MULTIVIBRATOR
IC603 MONOSTABLE MULTIVIBRATOR
R2178 SUB BRIGHT ADJ.
T2001 OSD SIGN POSITION ADJ.
R2458 DCF ADJ.
IC2001 CONTROL CIRCUIT
LP
RC
BU
TP60X
IC2006 OP AMP
IC407 SHARPNESS CORRECT
XC
XI
IC1402 OP AMP
C2476 DCF ADJ.
R2499 DCF ADJ.
R1472 SUB CONTRAST ADJ.
PC
FN
XF
R2461 DCF ADJ.
R2472 DCF ADJ.
R2493 DCF ADJ.
R822 COLOR ADJ.
R857 PICTURE ADJ. (CONTRAST)
J4401 ANALOG RGB
IC408 SHARPNESS ADJ.
TP80X
OP AMP IC1602
H-SYNC SW IC605
R855 PICTURE ADJ. (PEDESTAL)
RS
IC403
DCF CIRCUIT
R827 TINT ADJ.
IC801 CHROMA
IC607 V-SYNC. FORMER
IC802 MATRIX
R2820 WHITE CLIP LEVEL ADJ.
TP40X
TP2401
R1603 AGC ADJ.
IC606 INVERTOR
IC604 V-SYNC. SW
DI
J402 VIDEO 1
TP8
IC406 Y-SIGNAL SW
R675 TINT ADJ.
X801 CRYSTAL
XE
XG
R1435 W/B ADJ.
IC901 BIAS ADJ. SW
J401 S-VIDEO 1
IC101 VIDEO 1/2 SW
XJ
R820 APC ADJ.
IC1601 OP AMP
SD
SC
R1437 W/B ADJ.
IC412 SYNC-SIGNAL SW
R1426 r-POSITION ADJ.
R1424 r-GAIN ADJ.
SB
DO
TP4
J404 VIDEO 2
IC102 Y-SIGNAL SW
XH
IC2401 CROSS NOISE CANCELER
XA
SA
TP5
INTERFACE AND AGC IC1401
J403 S-VIDEO 2
(S-VIDEO)
IC411 CHROMA-SIGNAL SW
R1421 B SUB BIAS ADJ.
R1532 CLIP LEVEL ADJ.
J405 DC OUTPUT
IC103 C-SIGNAL SW (S-VIDEO)
T2401
R2417
DELAY LEVEL ADJ.
PA
R1417 R SUB BIAS ADJ.
TP6
R1414 SUB BIAS ADJ.
R1534 CLIP LEVEL ADJ.
K6901DE
MAIN PWB
IC1004 BUFFER
IC1002 OP AMP.
IC1007 OP AMP.
R1001 PHASE ADJ.
LCD CONTROLLER
R1495 G COM-AMP ADJ.
TP1004 TP1002
TP1005
R1498 G COM-BIAS ADJ.
R1071 CLK BIAS ADJ.
IC1001
TP1001
IC1406 OP AMP.
G
L1001
R1014 PHASE LEVEL ADJ.
TP1012
R1483 R COM-AMP ADJ.
IC1006 OP AMP.
SC
R1489 B COM-AMP ADJ.
R1070 CLK BIAS ADJ.
R1492 B COM-BIAS ADJ.
SD
IC1404 OP AMP.
R1069 CLK BIAS ADJ.
IC1405 OP AMP.
IC1403 OP AMP.
IC1005 OP AMP.
SA
R1486 R COM-BIAS ADJ.
TP
TP1011
R
B
TP1013
SB
K6902DE
SUB PWB
AC
AB
IC51
F51 5A 125V
RY51
RY52
T51
PL
BA
FA
PO
BU
K0320CE
RELAY UNIT
XB
XA
J4401
IC4401 C-SYNC CIRCUIT
XD
K7411DE
RGB PWB
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12

DESCRIPTION OF SCHEMATIC DIAGRAM

VOLTAGE MEASUREMENT CONDITION:

1. Voltages at test points are measured at the supply voltage of AC 120V. Signals are fed by a colour bar signal generator for servicing purpose and the above voltages are measured with a 20-kohm/V tester.

WAVEFORM MEASUREMENT CONDITION:

1. Waveforms at test points are observed at the supply voltage of AC 120V. Signals are fed by a colour bar signal generator for servicing purpose.

INDICATION OF RESISTOR & CAPACITOR:

RESISTOR

1. The unit of resistance "Ω" is omitted.
   (K = kΩ = 1 000 Ω, M = MΩ).
2. All resistors are ± 10%, unless otherwise noted.
   (J = ± 5%)
3. All resistors are 1/8W, unless otherwise noted.
4. All resistors are Carbon type, unless otherwise noted.
   Ⓒ: Solid Ⓦ: Cement
   Ⓢ: Oxide Film Ⓣ: Special
   Ⓝ: Metal Coating

CAPACITOR

1. All capacitors are μF, unless otherwise noted.
   (P = pF = μμF).
2. All capacitios are 50V, unless otherwise noted.
3. All capacitios are Ceramic type, unless otherwise noted.
   (ML): Mylar (TA): Tantalum
   (PF): Polypro Film (ST): Styrol

CAUTION:
This circuit diagram is original one, therefore there may be a slight difference from yours.

SAFETY NOTE:

1. DISCONNECT THE AC PLUG FROM THE AC OUTLET BEFORE REPLACEING PARTS.
2. SEMICONDUCTOR HEAT SINKS SHOULD BE REGARDED AS POTENTIAL SHOCK HAZARDS WHEN THE CHASSIS IS OPERATING.

IMPORTANT SAFETY NOTICE:

PARTS MARKED WITH "⚠"(▨) ARE IMPORTANT FOR MAINTAINING THE SAFETY OF THE SET. BE SURE TO REPLACE THESE PARTS WITH SPECIFIED ONES FOR MAINTAINING THE SAFETY AND PERFOMANCE OF THE SET.

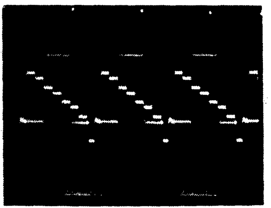


Fig. 1. Emitter of Q417
Y signal
20μs/div 0.5V/div

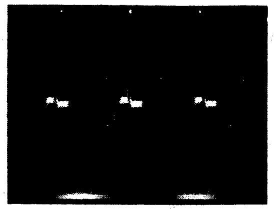


Fig. 2. Pin 31 of IC801
C signal
20μs/div 50mV/div

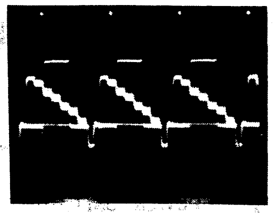


Fig. 3. Pin 4 of IC801
Sync input
20μs/div 0.5V/div

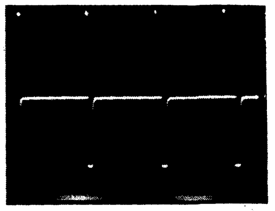


Fig. 4. Pin 28 of IC801,
Sync judgment output
20μs/div 2V/div

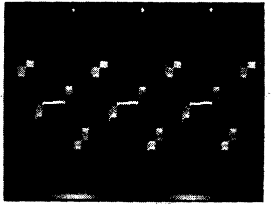


Fig. 5. Pin 20 of IC801
R-Y
20μs/div 1V/div

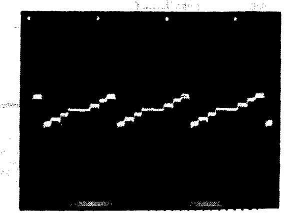


Fig. 6. Pin 21 of IC801
G-Y
20μs/div 1V/div

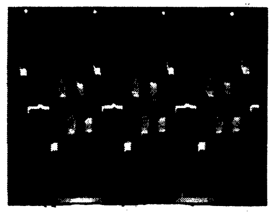


Fig. 7. Pin 22 of IC801
B-Y
20μs/div 1V/div

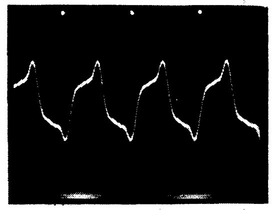


Fig. 8. Emitter of Q803
Fsc
0.1μs/div 0.2V/div

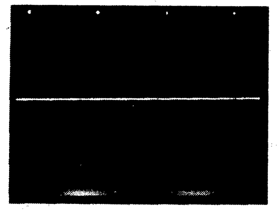


Fig. 9. Pin 7 of IC602
Blanking
20μs/div 0.2V/div

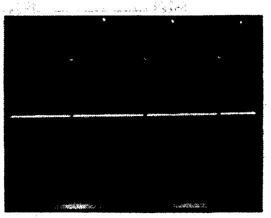


Fig. 10. Pin 6 of IC603
Clamp
20μs/div 0.2V/div

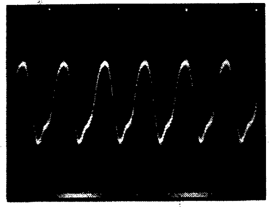


Fig. 11. Pin 6 of IC6009
28MHz, OSC OUT
20μs/div 1V/div

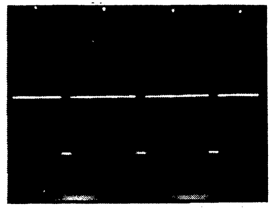


Fig. 12. Pin 7 of IC604
V-Sync
5ms/div 1V/div

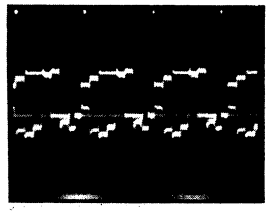


Fig. 13. Pin 3 of connector DI
RED input
20μs/div 0.5V/div

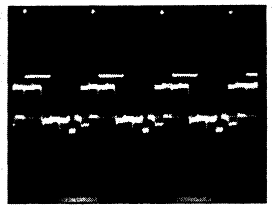


Fig. 14. Pin 5 of connector DI
GREEN input
20μs/div 0.5V/div

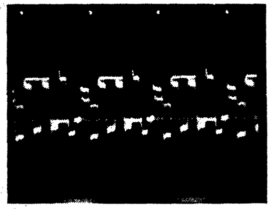


Fig. 15. Pin 7 of connector DI
BLUE input
20μs/div 0.5V/div

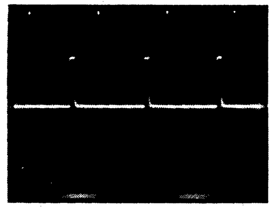


Fig. 16. Pin 1 of connector DI
H-Sync input
20μs/div 2V/div

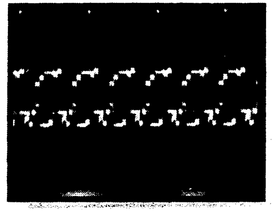


Fig. 17. Pin 4 of connector DO
RED output
20μs/div 0.5V/div

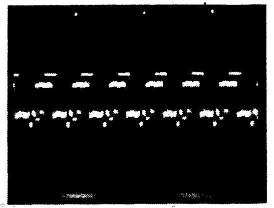


Fig. 18. Pin 6 of connector DO
GREEN output
20μs/div 0.5V/div

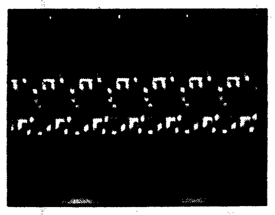


Fig. 19. Pin 8 of connector DO
BLUE output
20μs/div 0.5V/div

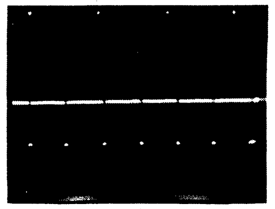


Fig. 20. Pin 1 of connector DO
2H sync output
20μs/div 2V/div

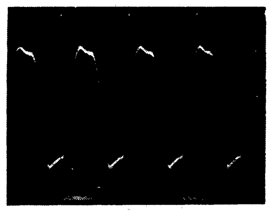


Fig. 21. Pin 2 of GREEN LCD
CKI
20ns/div 1V/div

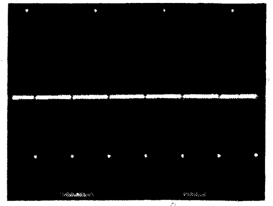


Fig. 22. Pin 4 of GREEN LCD
RES
20μs/div 2V/div

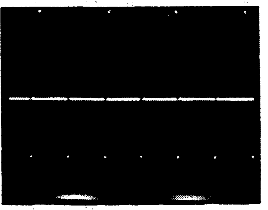


Fig. 23. Pin 9 of IC1001
HSYO
20μs/div 2V/div

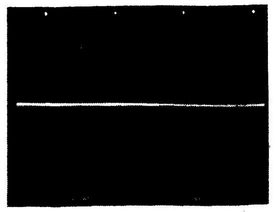


Fig. 24. Pin 14 of GREEN LCD
LCD VSYNC
5ms/div 2V/div

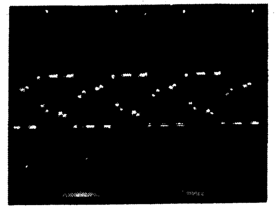


Fig. 25. Pin 3 of connector SB
RED-VIDEO
20μs/div 1V/div

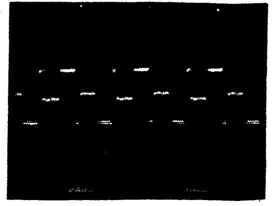


Fig. 26. Pin 5 of connector SB
GREEN-VIDEO
20μs/div 1V/div

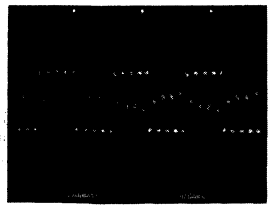


Fig. 27. Pin 1 of connector SB
BLUE-VIDEO
20μs/div 1V/div

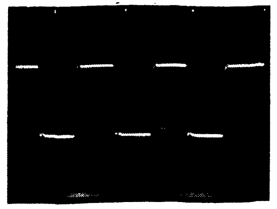
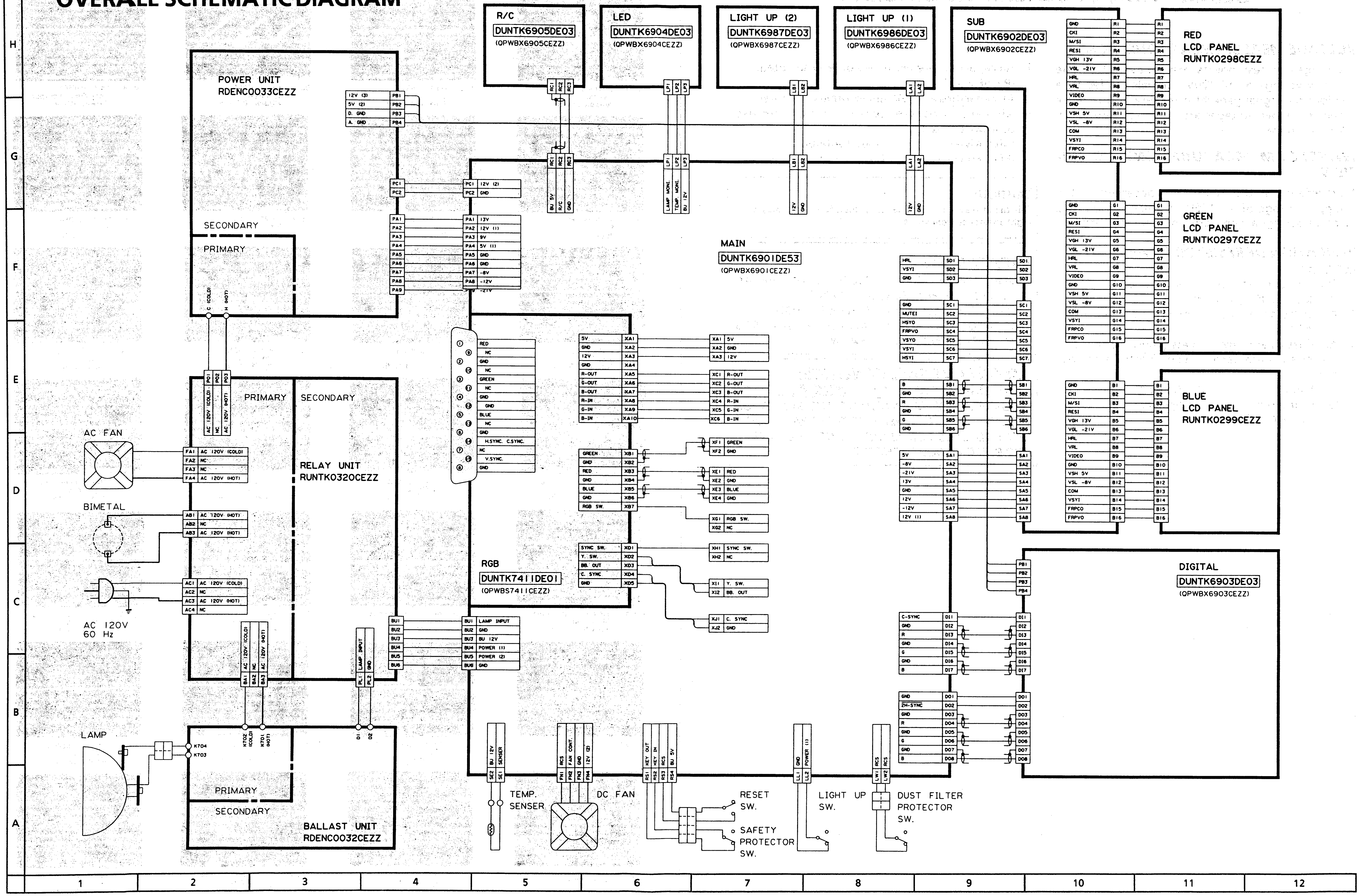


Fig. 28. Pin 13 of GREEN LCD
LCD COM
20μs/div 2V/div

OVERALL SCHEMATIC DIAGRAM


R/C
DUNTK6905DE03
(QPWBX6905CEZZ)
LED
DUNTK6904DE03
(QPWBX6904CEZZ)
LIGHT UP (2)
DUNTK6987DE03
(QPWBX6987CEZZ)
LIGHT UP (1)
DUNTK6986DE03
(QPWBX6986CEZZ)
SUB
DUNTK6902DE03
(QPWBX6902CEZZ)
RED
LCD PANEL
RUNTK0298CEZZ
GREEN
LCD PANEL
RUNTK0297CEZZ
BLUE
LCD PANEL
RUNTK0299CEZZ
POWER UNIT
RDENC0033CEZZ
SECONDARY
PRIMARY
MAIN
DUNTK6901DE53
(QPWBX6901CEZZ)
RGB
DUNTK7411DE01
(QPWBS7411CEZZ)
DIGITAL
DUNTK6903DE03
(QPWBX6903CEZZ)
RELAY UNIT
RUNTK0320CEZZ
AC FAN
BIMETAL
AC 120V
60 Hz
LAMP
BALLAST UNIT
RDENC0032CEZZ
TEMP.
SENSER
DC FAN
RESET
SW.
SAFETY
PROTECTOR
SW.
LIGHT UP
SW.
DUST FILTER
PROTECTOR
SW.
H
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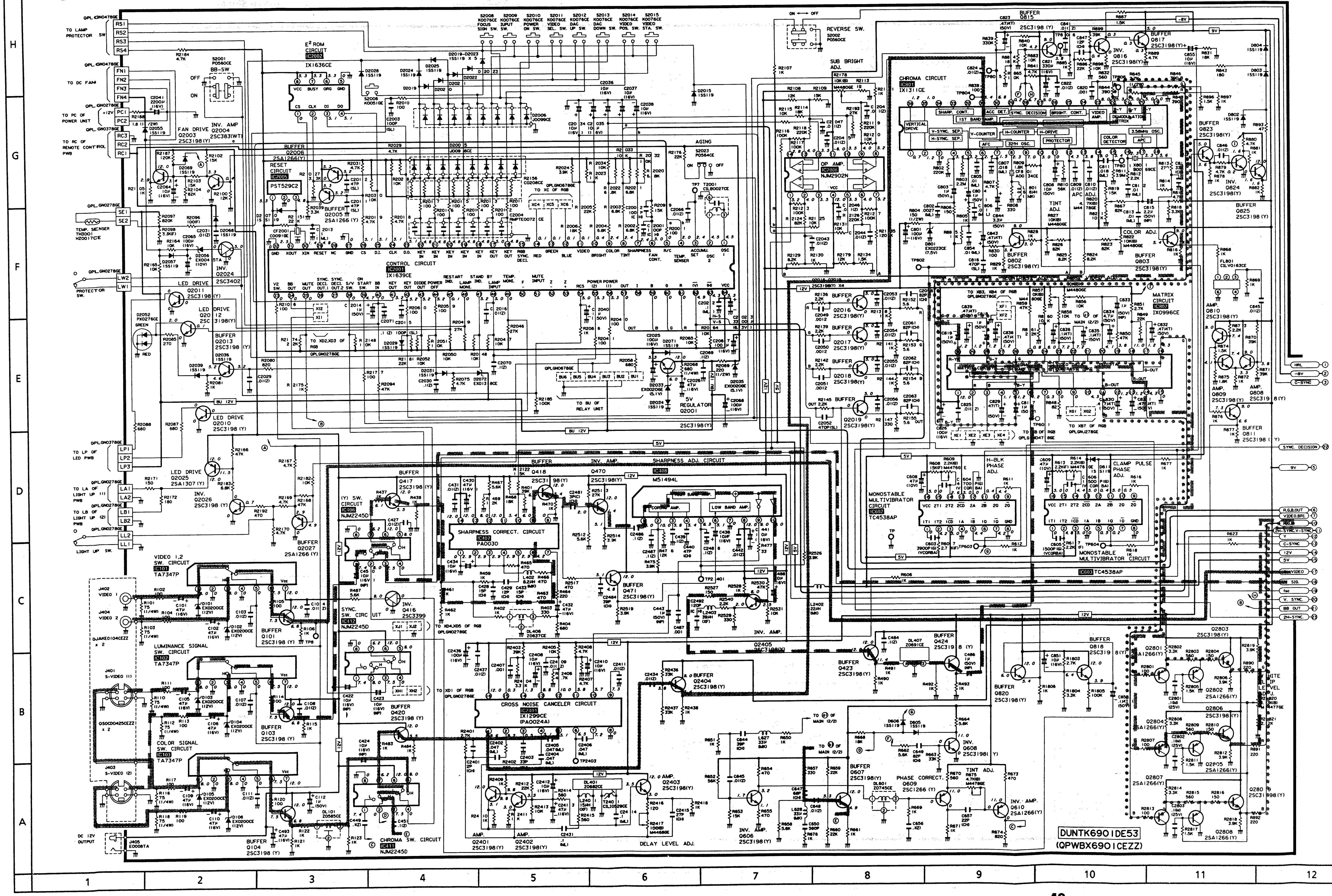
SCHEMATIC DIAGRAM: MAIN-1

Video Signal (Video)	Luminance Signal (Y)	(G-Y) G Signal
Color Signal (C)	(R-Y) R Signal	(B-Y) B Signal


H
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C
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12
TO LAMP PROTECTOR SW
TO DC FAN
TO PC OF POWER UNIT
TO RC OF REMOTE CONT'ROL PWB
TEMP. SENSER TH3001
PROTECTOR SW.
TO LP OF LED PWB
TO LA OF LIGHT UP (1) PWB
TO LB OF LIGHT UP (2) PWB
LIGHT UP SW.
E² ROM CIRCUIT IC2002 IX1636CE
BB-SW
FAN DRIVE Q2003 2SC3198(Y)
INV. AMP Q2004 2SC383(WT)
BUFFER Q2006 2SA1266(Y)
RESET CIRCUIT IC2005 PST529C2
BUFFER Q2005 2SA1266(Y)
CONTROL CIRCUIT IC2001 IX1639CE
LED DRIVE Q2011 2SC3198(Y)
LED DRIVE Q2012 2SC3198(Y)
BUFFER Q2013 2SC3198(Y)
LED DRIVE Q2010 2SC3198(Y)
LED DRIVE Q2025 2SA1307(Y)
INV. Q2026 2SC3198(Y)
BUFFER Q2027 2SA1266(Y)
5V REGULATOR Q2001
AGING
REVERSE SW.
SUB BRIGHT ADJ.
CHROMA CIRCUIT IC801 IX1311CE
OP AMP. IC2006 NJM2902N
BUFFER Q815 2SC3198(Y)
BUFFER Q817 2SC3198(Y)
INV. Q816 2SC3198(Y)
BUFFER Q823 2SC3198(Y)
INV. Q824 2SC3198(Y)
BUFFER Q825 2SC3198(Y)
BUFFER Q802 2SC3198(Y)
BUFFER Q803 2SC3198(Y)
TINT ADJ.
COLOR ADJ.
MATRIX CIRCUIT IC802 IX0996CE
AMP. Q810 2SC3198(Y)
AMP. Q809 2SC3198(Y)
AMP. Q808 2SC3198(Y)
BUFFER Q811 2SC3198(Y)
BUFFER Q2016 2SC3198(Y)
BUFFER Q2017 2SC3198(Y)
BUFFER Q2018 2SC3198(Y)
BUFFER Q2019 2SC3198(Y)
MONOSTABLE MULTIVIBRATOR CIRCUIT IC601 TC4538AP
H-BLK PHASE ADJ.
CLAMP PULSE PHASE ADJ.
MONOSTABLE MULTIVIBRATOR CIRCUIT IC603 TC4538AP
BUFFER Q418
INV. AMP. Q470
SHARPNESS ADJ. CIRCUIT IC408 M51494L
(Y) SW. CIRCUIT IC406 NJM2245D
BUFFER Q417 2SC3198(Y)
SHARPNESS CORRECT. CIRCUIT IC407 PA0030
SYNC. SW. CIRC UIT IC412 NJM2245D
INV. Q416 2SC3399
BUFFER Q471 2SC3198(Y)
INV. AMP. Q2405
BUFFER Q420 2SC3198(Y)
BUFFER Q424 2SC3198(Y)
BUFFER Q423 2SC3198(Y)
BUFFER Q2404 2SC3198(Y)
CROSS NOISE CANCELER CIRCUIT IC2401 IX1299CE (PA0024A)
AMP. Q2401 2SC3198(Y)
AMP. Q2402 2SC3198(Y)
AMP. Q2403 2SC3198(Y)
DELAY LEVEL ADJ.
VIDEO 1,2 SW. CIRCUIT IC101 TA7347P
LUMINANCE SIGNAL SW. CIRCUIT IC102 TA7347P
COLOR SIGNAL SW. CIRCUIT IC103 TA7347P
BUFFER Q101 2SC3198(Y)
BUFFER Q103 2SC3198(Y)
BUFFER Q104 2SC3198(Y)
CHROMA SW. CIRCUIT IC411 NJM2245D
J402 VIDEO 1
J404 VIDEO 2
J401 S-VIDEO (1)
J403 S-VIDEO (2)
DC 12V OUTPUT J405
INV. Q606
INV. Q608 2SC3198(Y)
BUFFER Q607 2SC3198(Y)
PHASE CORRECT. Q609 2SC1266(Y)
TINT ADJ.
INV.·AMP. Q610 2SA1266(Y)
BUFFER Q818 2SC3198(Y)
BUFFER Q820 2SC3198(Y)
WHITE LEVEL ADJ.
HRL
-8V
C-SYNC
SYNC. DECISION
9V
R.G.B.OUT
VIDEO.BRI.
ZH-SYNC.V-SYNC
Y
C-SYNC
12V
5V
VIDEO
SIG.
fsc
V. SYNC.
BB OUT
ZH-SYNC.
DUNTK6901DE53
(QPWBX6901CEZZ)

SCHEMATIC DIAGRAM: MAIN-2

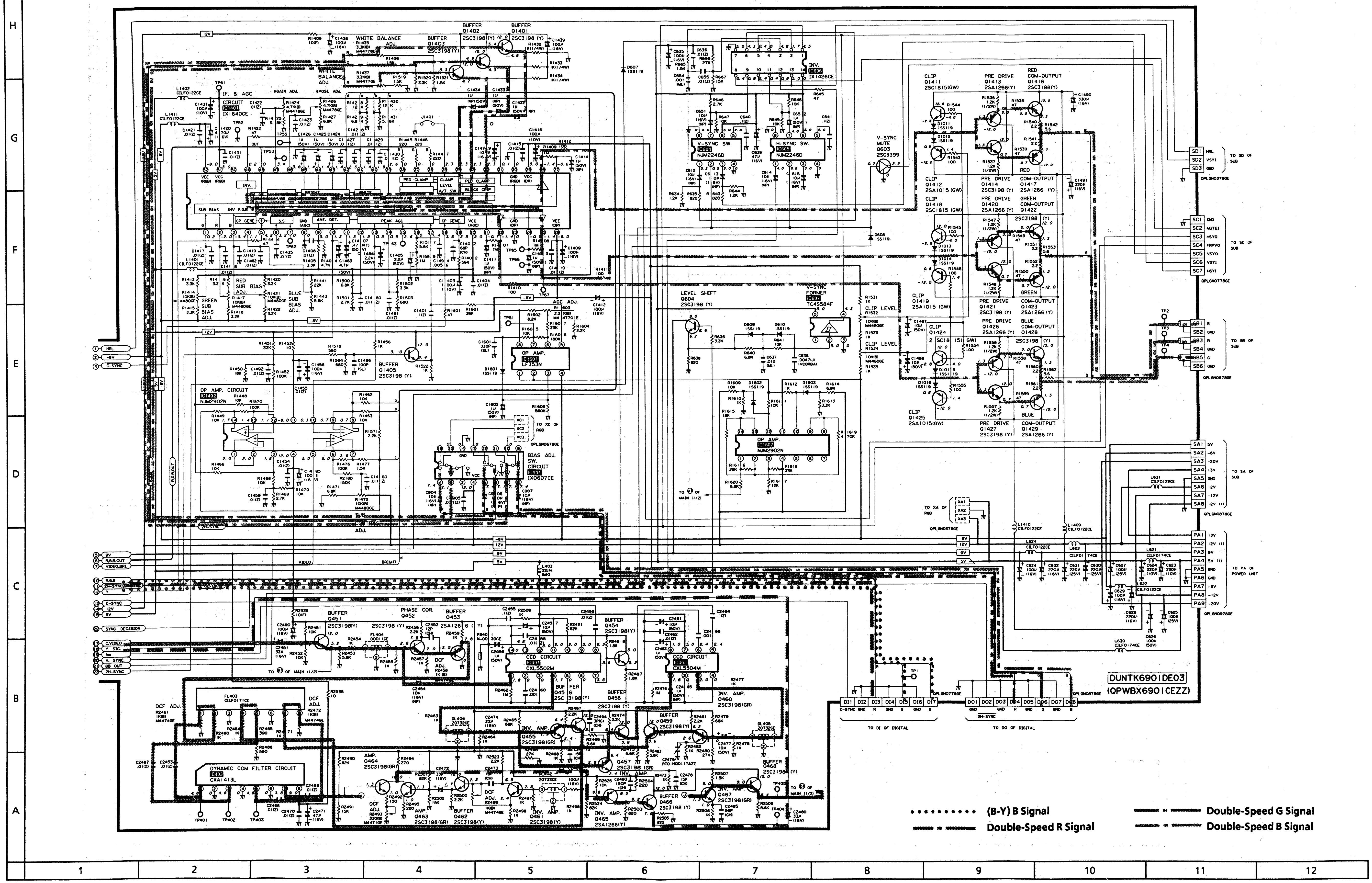
Video Signal (Video)

Color Signal (C)

Luminance Signal (Y)

(R-Y) R Signal

(G-Y) G Signal


H
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IF. & AGC CIRCUIT IX1640CE
WHITE BALANCE ADJ.
BUFFER Q1402 2SC3198 (Y)
BUFFER Q1401 2SC3198 (Y)
BUFFER Q1403 2SC3198 (Y)
RED SUB BIAS ADJ.
GREEN SUB BIAS ADJ.
BLUE SUB BIAS ADJ.
BUFFER Q1405 2SC3198 (Y)
OP AMP. CIRCUIT NJM2902N
OP AMP. LF353N
BIAS ADJ. SW. CIRCUIT IX0607CE
V-SYNC SW. NJM2246D
H-SYNC SW. NJM2246D
INV. IX1426CE
V-SYNC MUTE Q603 2SC3399
LEVEL SHIFT Q604 2SC3198 (Y)
V-SYNC FORMER TC4S584F
OP AMP. NJM2902N
CLIP LEVEL
TO SD OF SUB
TO SC OF SUB
TO SB OF SUB
TO SA OF SUB
TO PA OF POWER UNIT
TO XA OF RGB
TO XC OF RGB
BUFFER Q451 2SC3198 (Y)
PHASE COR. Q452 2SC3198 (Y)
BUFFER Q453 2SA1266 (Y)
CCD CIRCUIT CXL5502M
CCD CIRCUIT CXL5504M
DYNAMIC COM FILTER CIRCUIT CXA1413L
DCF ADJ.
TO DI OF DIGITAL
TO DO OF DIGITAL
DUNTK6901DE03
(QPWBX6901CEZZ)

(B-Y) B Signal

Double-Speed R Signal

Double-Speed G Signal

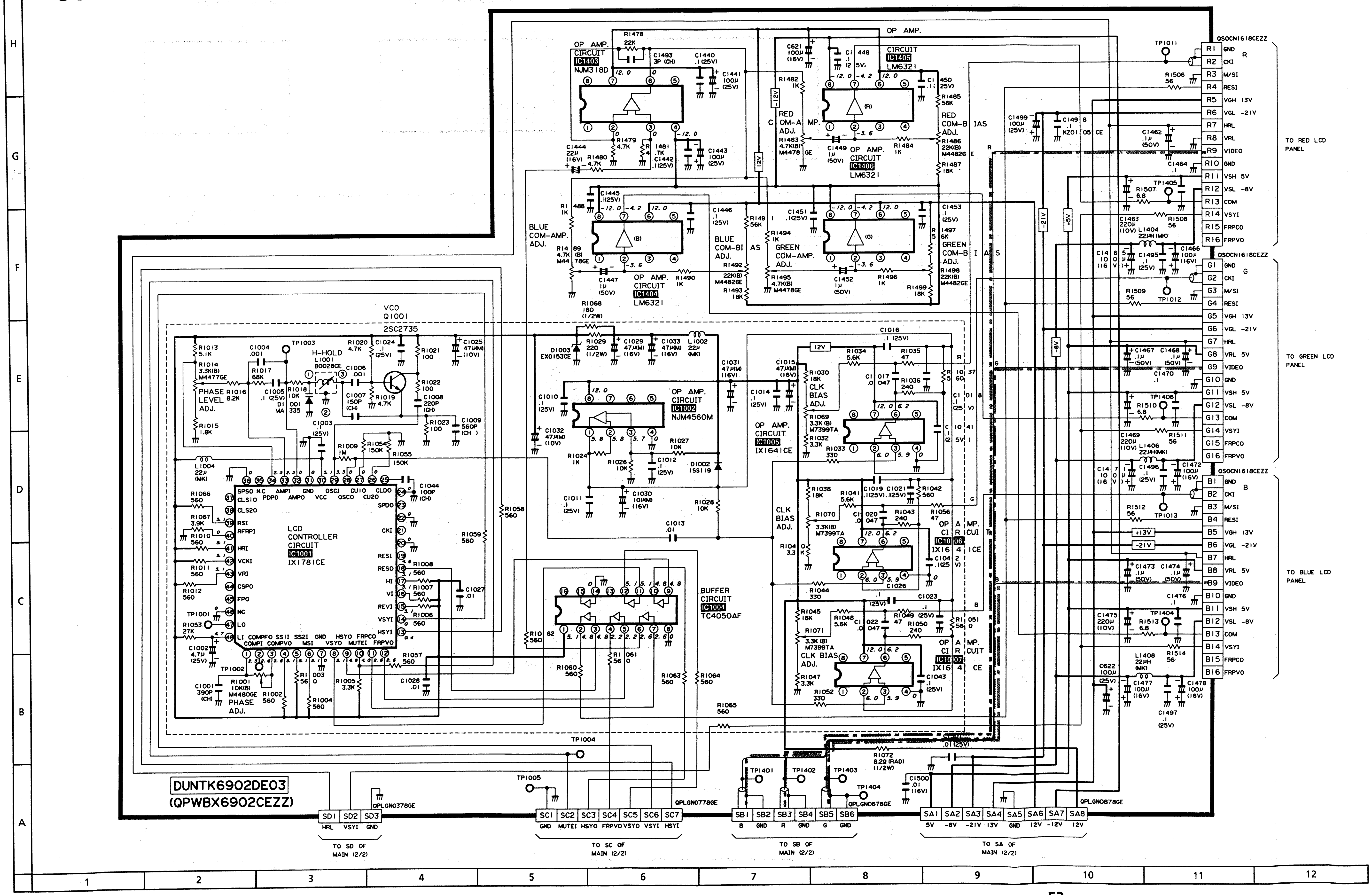
Double-Speed B Signal

SCHEMATIC DIAGRAM: SUB UNIT

Double-Speed R Signal

Double-Speed G Signal

Double-Speed B Signal


OP AMP. CIRCUIT IC1403 NJM318D
OP AMP. CIRCUIT IC1405 LM6321
OP AMP. CIRCUIT IC1406 LM6321
OP AMP. CIRCUIT IC1404 LM6321
RED COM-AMP. ADJ.
RED COM-BIAS ADJ.
BLUE COM-AMP. ADJ.
BLUE COM-BIAS ADJ.
GREEN COM-AMP. ADJ.
GREEN COM-BIAS ADJ.
VCO Q1001 2SC2735
H-HOLD L1001 B0028CE
PHASE LEVEL ADJ.
OP AMP. CIRCUIT IC1002 NJM4560M
OP AMP. CIRCUIT IC1005 IX1641CE
CLK BIAS ADJ.
OP AMP. CIRCUIT IC1006 IX1641CE
OP AMP. CIRCUIT IC1007 IX1641CE
LCD CONTROLLER CIRCUIT IC1001 IX1781CE
PHASE ADJ.
BUFFER CIRCUIT IC1004 TC4050AF
TP1001
TP1002
TP1003
TP1004
TP1005
TP1011
TP1012
TP1013
TP1401
TP1402
TP1403
TP1404
TP1405
TP1406
QSOCN1618CEZZ
R1 GND
R2 CKI
R3 M/SI
R4 RESI
R5 VGH 13V
R6 VGL -21V
R7 HRL
R8 VRL
R9 VIDEO
R10 GND
R11 VSH 5V
R12 VSL -8V
R13 COM
R14 VSYI
R15 FRPCO
R16 FRPVO
TO RED LCD PANEL
G1 GND
G2 CKI
G3 M/SI
G4 RESI
G5 VGH 13V
G6 VGL -21V
G7 HRL
G8 VRL 5V
G9 VIDEO
G10 GND
G11 VSH 5V
G12 VSL -8V
G13 COM
G14 VSYI
G15 FRPCO
G16 FRPVO
TO GREEN LCD PANEL
B1 GND
B2 CKI
B3 M/SI
B4 RESI
B5 VGH 13V
B6 VGL -21V
B7 HRL
B8 VRL 5V
B9 VIDEO
B10 GND
B11 VSH 5V
B12 VSL -8V
B13 COM
B14 VSYI
B15 FRPCO
B16 FRPVO
TO BLUE LCD PANEL
DUNTK6902DE03
(QPWBX6902CEZZ)
SD1 HRL
SD2 VSYI
SD3 GND
QPLGN0378GE
TO SD OF MAIN (2/2)
SC1 GND
SC2 MUTEI
SC3 HSYO
SC4 FRPVO
SC5 VSYO
SC6 VSYI
SC7 HSYI
QPLGN0778GE
TO SC OF MAIN (2/2)
SB1 B
SB2 GND
SB3 R
SB4 GND
SB5 G
SB6 GND
QPLGN0678GE
TO SB OF MAIN (2/2)
SA1 5V
SA2 -8V
SA3 -21V
SA4 13V
SA5 GND
SA6 12V
SA7 -12V
SA8 12V
QPLGN0878GE
TO SA OF MAIN (2/2)
H
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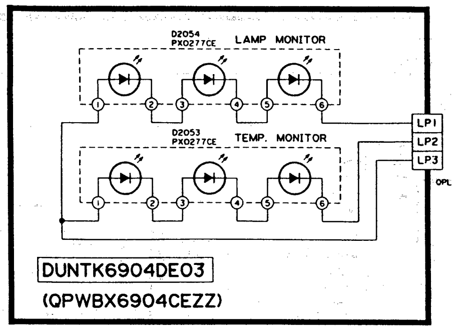
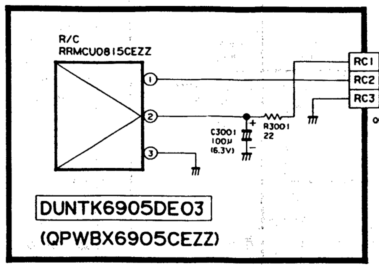
SCHEMATIC DIAGRAM: DIGITAL, LED, SWITCH UNIT

········· (R-Y) R Signal
▬ ▬ ▬ (G-Y) G Signal
········· (B-Y) B Signal
▬ ▬ ▬ Double-Speed R Signal
▬ ▬ ▬ Double-Speed G Signal
▬ ▬ ▬ Double-Speed B Signal

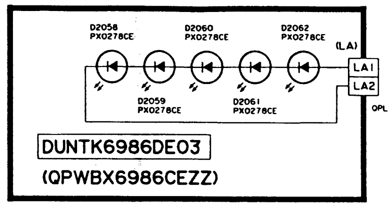
LED


D2054 PX0277CE
LAMP MONITOR
D2053 PX0277CE
TEMP. MONITOR
LP1
LP2
LP3
TO LP OF MAIN (1/2)
QPLGN0378GE
DUNTK6904DE03
(QPWBX6904CEZZ)

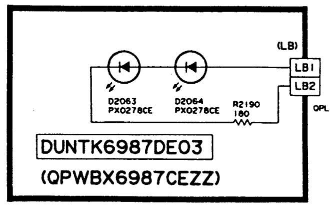
R/C


R/C
RRMCU0815CEZZ
RC1
RC2
RC3
TO RC OF MAIN (1/2)
C3001 100μ (6.3V)
R3001 22
QPLGN0378GE
DUNTK6905DE03
(QPWBX6905CEZZ)

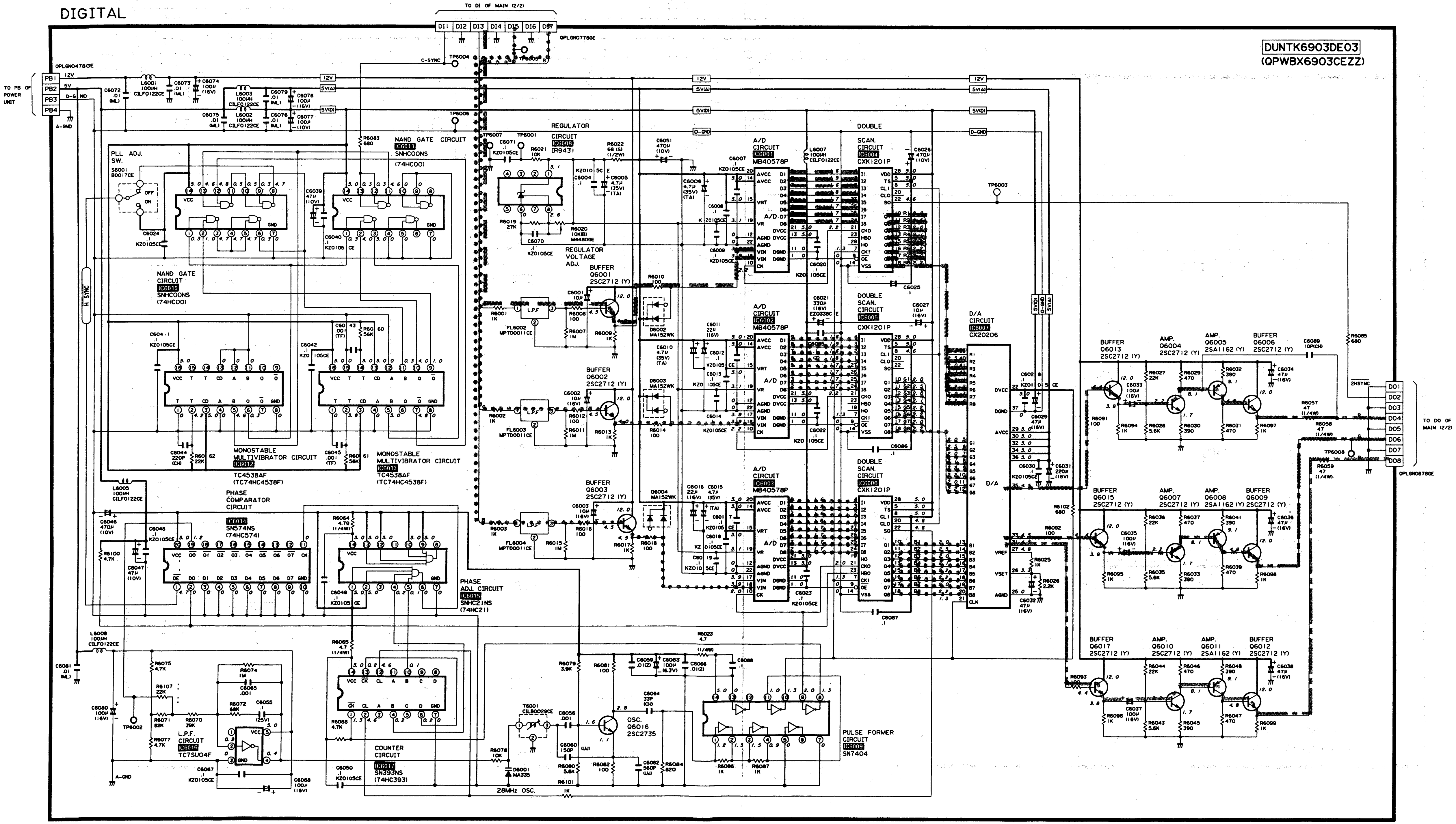
LIGHT UP (1)


D2058 PX0278CE
D2060 PX0278CE
D2062 PX0278CE
D2059 PX0278CE
D2061 PX0278CE
(LA)
LA1
LA2
TO LA OF MAIN (1/2)
QPLGN0280GE
DUNTK6986DE03
(QPWBX6986CEZZ)

LIGHT UP (2)


D2063 PX0278CE
D2064 PX0278CE
R2190 180
(LB)
LB1
LB2
TO LB OF MAIN (1/2)
QPLGN0280GE
DUNTK6987DE03
(QPWBX6987CEZZ)

DIGITAL


TO DI OF MAIN (2/2)
DI1
DI2
DI3
DI4
DI5
DI6
DI7
QPLGN0778GE
DUNTK6903DE03
(QPWBX6903CEZZ)
TO PB OF POWER UNIT
PB1
PB2
PB3
PB4
12V
5V
D-GND
A-GND
QPLGN0478GE
C-SYNC
TP6004
TP6005
TP6006
TP6007
TP6001
TP6002
TP6003
TP6008
5V(A)
5V(D)
PLL ADJ. SW.
S6001 B0017CE
OFF
ON
NAND GATE CIRCUIT
IC6011
SNHC00NS
(74HC00)
NAND GATE CIRCUIT
IC6010
SNHC00NS
(74HC00)
REGULATOR CIRCUIT
IC6008
IR9431
REGULATOR VOLTAGE ADJ.
H SYNC
MONOSTABLE MULTIVIBRATOR CIRCUIT
IC6012
TC4538AF
(TC74HC4538F)
MONOSTABLE MULTIVIBRATOR CIRCUIT
IC6013
TC4538AF
(TC74HC4538F)
PHASE COMPARATOR CIRCUIT
IC6014
SN574NS
(74HC574)
PHASE ADJ. CIRCUIT
IC6015
SNHC21NS
(74HC21)
L.P.F. CIRCUIT
IC6016
TC7SU04F
COUNTER CIRCUIT
IC6017
SN393NS
(74HC393)
OSC.
Q6016
2SC2735
28MHz OSC.
PULSE FORMER CIRCUIT
IC6009
SN7404
BUFFER Q6001 2SC2712 (Y)
BUFFER Q6002 2SC2712 (Y)
BUFFER Q6003 2SC2712 (Y)
FL6002 MPTD0011CE
FL6003 MPTD0011CE
FL6004 MPTD0011CE
L.P.F.
A/D CIRCUIT
IC6001
MB40578P
A/D CIRCUIT
IC6002
MB40578P
A/D CIRCUIT
IC6003
MB40578P
DOUBLE SCAN. CIRCUIT
IC6004
CXK1201P
DOUBLE SCAN. CIRCUIT
IC6005
CXK1201P
DOUBLE SCAN. CIRCUIT
IC6006
CXK1201P
D/A CIRCUIT
IC6007
CX20206
D/A
BUFFER Q6013 2SC2712 (Y)
AMP. Q6004 2SC2712 (Y)
AMP. Q6005 2SA1162 (Y)
BUFFER Q6006 2SC2712 (Y)
BUFFER Q6015 2SC2712 (Y)
AMP. Q6007 2SC2712 (Y)
AMP. Q6008 2SA1162 (Y)
BUFFER Q6009 2SC2712 (Y)
BUFFER Q6017 2SC2712 (Y)
AMP. Q6010 2SC2712 (Y)
AMP. Q6011 2SA1162 (Y)
BUFFER Q6012 2SC2712 (Y)
2HSYNC
DO1
DO2
DO3
DO4
DO5
DO6
DO7
DO8
TO DO OF MAIN (2/2)
QPLGN0878GE
H
G
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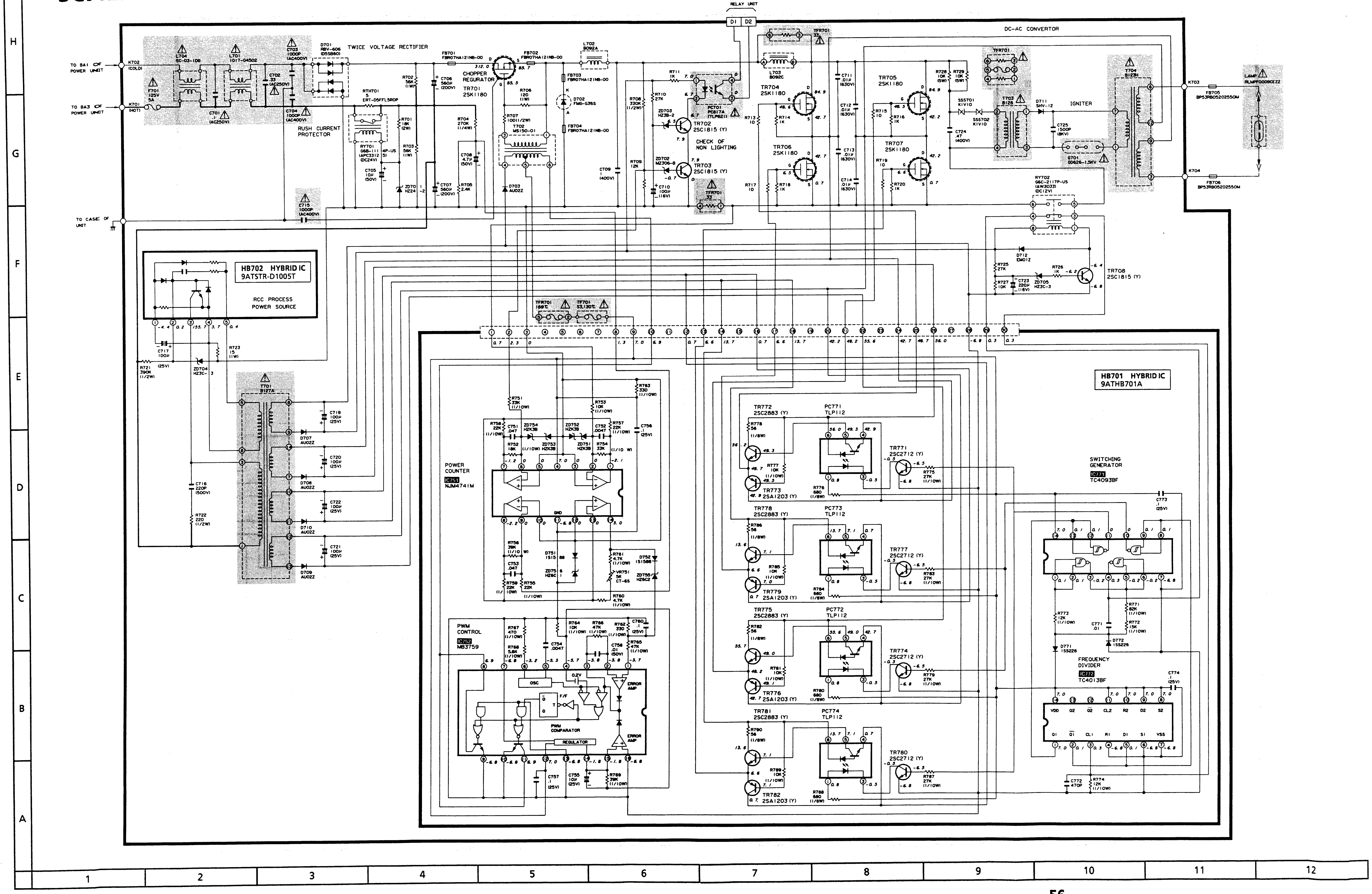
SCHEMATIC DIAGRAM: BALLAST UNIT


TO BA1 POWER UNIT
TO BA3 POWER UNIT
K702 (COLD)
K701 (HOT)
F701 125V 3A
L704 SC-03-10B
L701 1017-04502
C701 .1 (AC250V)
C702 .33 (AC250V)
C703 1000P (AC400V)
C704 1000P (AC400V)
D701 RBV-606 (D5SB60)
TWICE VOLTAGE RECTIFIER
RUSH CURRENT PROTECTOR
RTH701 5 ERT-D5FFL5R0P
RY701 G6B-1114P-US (APC3312 5) (DC24V)
C705 10μ (50V)
ZD701 HZ24-2
R701 18K (2W)
R702 56K (1W)
R703 56K (1W)
C706 560μ (200V)
C707 560μ (200V)
R704 270K (1/4W)
R705 2.4K
C708 4.7μ (50V)
FB701 FBR07HA121NB-00
FB702 FBR07HA121NB-00
FB703 FBR07HA121NB-00
FB704 FBR07HA121NB-00
CHOPPER REGURATOR
TR701 2SK1180
R706 120 (1W)
R707 100(1/2W)
T702 MS150-01
D703 AU02Z
L702 B092A
D702 FMG-G36S
C709 1 (400V)
C715 1000P (AC400V)
TO CASE OF UNIT
TO PL OF RELAY UNIT
D1 D2
TFR701
R711 1K
R708 330K (1/2W)
R710 27K
PC701 PC817A (TLP621)
ZD703 HZ3B-2
TR702 2SC1815 (Y)
CHECK OF NON LIGHTING
ZD702 MZ306-B
R709 12K
TR703 2SC1815 (Y)
C710 100μ (16V)
L703 B092C
TR704 2SK1180
TR706 2SK1180
R713 10
R714 1K
R717 10
R718 1K
C711 .01μ (630V)
C712 .01μ (630V)
C713 .01μ (630V)
C714 .01μ (630V)
DC-AC CONVERTOR
TR705 2SK1180
TR707 2SK1180
R715 10
R716 1K
R719 10
R720 1K
R728 10K (5W)
R729 10K (5W)
C724 .47 (400V)
SS5701 K1V10
SS5702 K1V10
T703 B128
D711 SHV-12
IGNITER
C725 1500P (8KV)
G701 GD626-1.5KV
T704 B123H
K703
K704
FB705 BP53RB0520255OM
FB706 BP53RB0520255OM
LAMP RLMPF0009CEZZ
RY702 G6C-2117P-US (AW3033) (DC12V)
D712 EM01Z
R725 27K
R726 1K
R727 10K
C723 220μ (16V)
ZD705 HZ3C-3
TR708 2SC1815 (Y)
HB702 HYBRID IC 9ATSTR-D1005T
RCC PROCESS POWER SOURCE
TFR701 169°C
TF701 53,130°C
C717 100μ (25V)
R721 390K (1/2W)
ZD704 HZ3C-3
R723 15 (1W)
T701 B127A
C716 220P (500V)
R722 220 (1/2W)
C719 100μ (25V)
C720 100μ (25V)
C721 100μ (25V)
C722 100μ (25V)
D707 AU02Z
D708 AU02Z
D709 AU02Z
D710 AU02Z
HB701 HYBRID IC 9ATHB701A
POWER COUNTER
IC751 NJM4741M
R751 33K (1/10W)
R753 10K (1/10W)
R763 330 (1/10W)
R758 22K (1/10W)
C751 .047
ZD754 HZK3B
ZD752 HZK3B
C752 .0047
R757 22K (1/10W)
C756 1 (25V)
R752 18K (1/10W)
ZD753 HZK3B
ZD751 HZK3B
R754 33K (1/10W)
GND
R756 39K (1/10W)
C753 .047
R759 22K (1/10W)
R755 22K (1/10W)
D751 1SS188
ZD755 HZ6C
R761 4.7K (1/10W)
VR751 5K CT-6S
D752 1SS188
ZD756 HZ6C2
R760 4.7K (1/10W)
PWM CONTROL
IC752 MB3759
R767 470 (1/10W)
R768 5.6K (1/10W)
C754 .0047
R764 10K (1/10W)
R766 47K (1/10W)
R762 330 (1/10W)
C760 1 (25V)
R765 47K (1/10W)
C758 .01 (50V)
OSC
F/F
ERROR AMP
PWM COMPARATOR
REGULATOR
C757 .1 (25V)
C755 10μ (25V)
R769 39K (1/10W)
TR772 2SC2883 (Y)
R778 56 (1/8W)
R777 10K (1/10W)
TR773 2SA1203 (Y)
PC771 TLP112
R776 680 (1/8W)
TR771 2SC2712 (Y)
R775 27K (1/10W)
TR778 2SC2883 (Y)
R786 56 (1/8W)
R785 10K (1/10W)
TR779 2SA1203 (Y)
PC773 TLP112
R784 680 (1/8W)
TR777 2SC2712 (Y)
R783 27K (1/10W)
TR775 2SC2883 (Y)
R782 56 (1/8W)
R781 10K (1/10W)
TR776 2SA1203 (Y)
PC772 TLP112
R780 680 (1/8W)
TR774 2SC2712 (Y)
R779 27K (1/10W)
TR781 2SC2883 (Y)
R790 56 (1/8W)
R789 10K (1/10W)
TR782 2SA1203 (Y)
PC774 TLP112
R788 680 (1/8W)
TR780 2SC2712 (Y)
R787 27K (1/10W)
SWITCHING GENERATOR
IC771 TC4093BF
C773 .1 (25V)
R773 12K (1/10W)
C771 .01
R771 82K (1/10W)
R772 15K (1/10W)
D771 1SS226
D772 1SS226
FREQUENCY DIVIDER
IC772 TC4013BF
C774 .1 (25V)
VDD Q2 Q̄2 CL2 R2 D2 S2
Q1 Q̄1 CL1 R1 D1 S1 VSS
C772 470P
R774 12K (1/10W)
H
G
F
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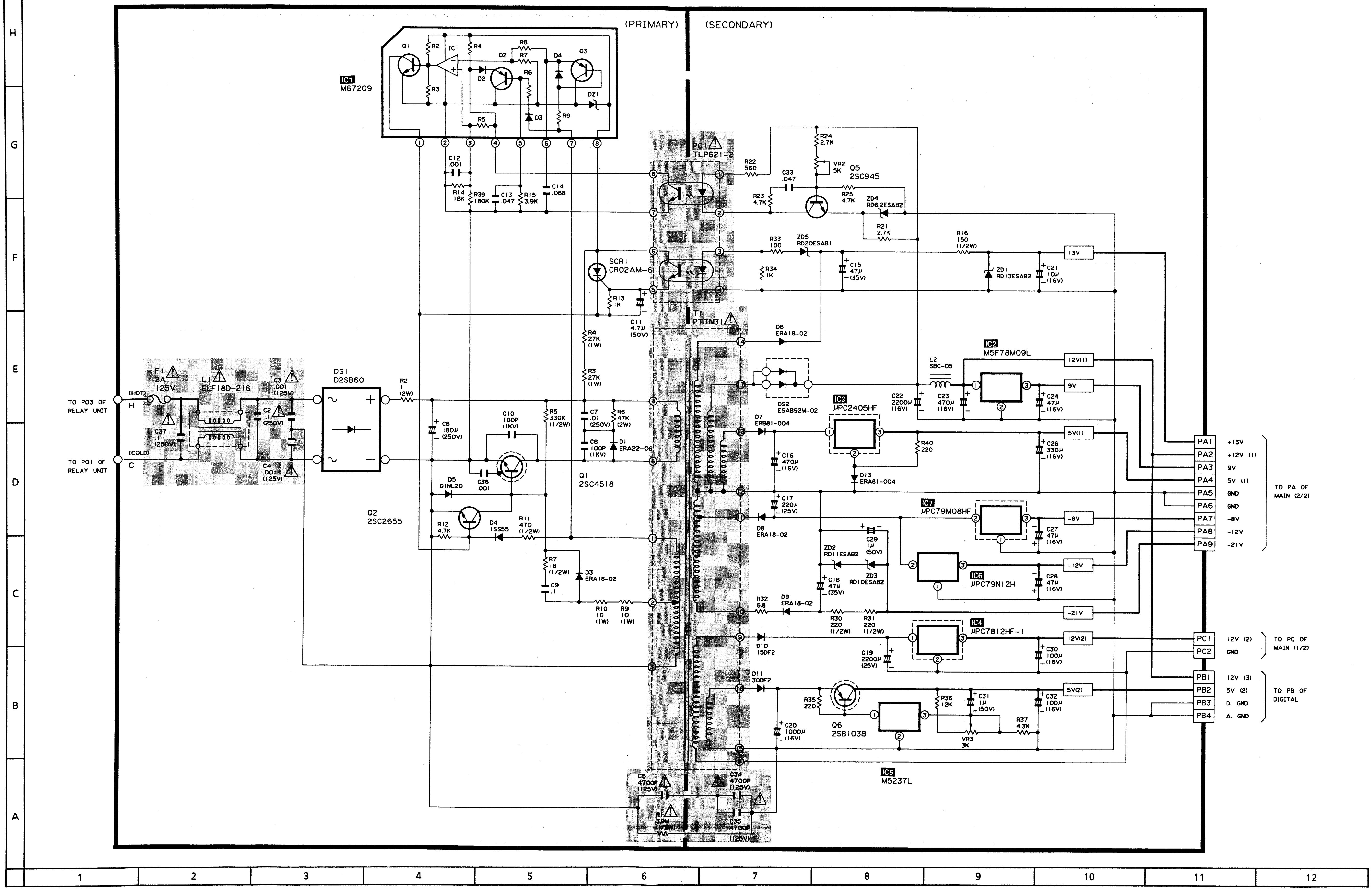
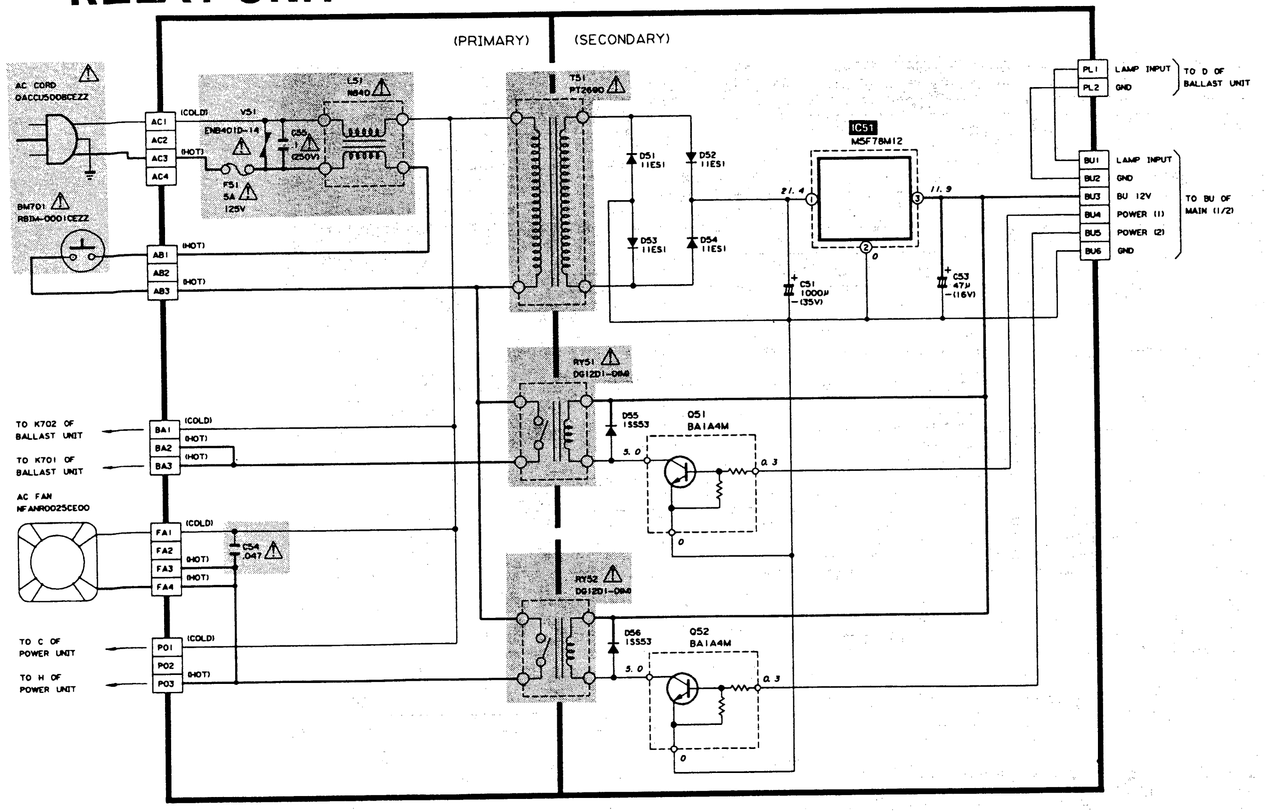
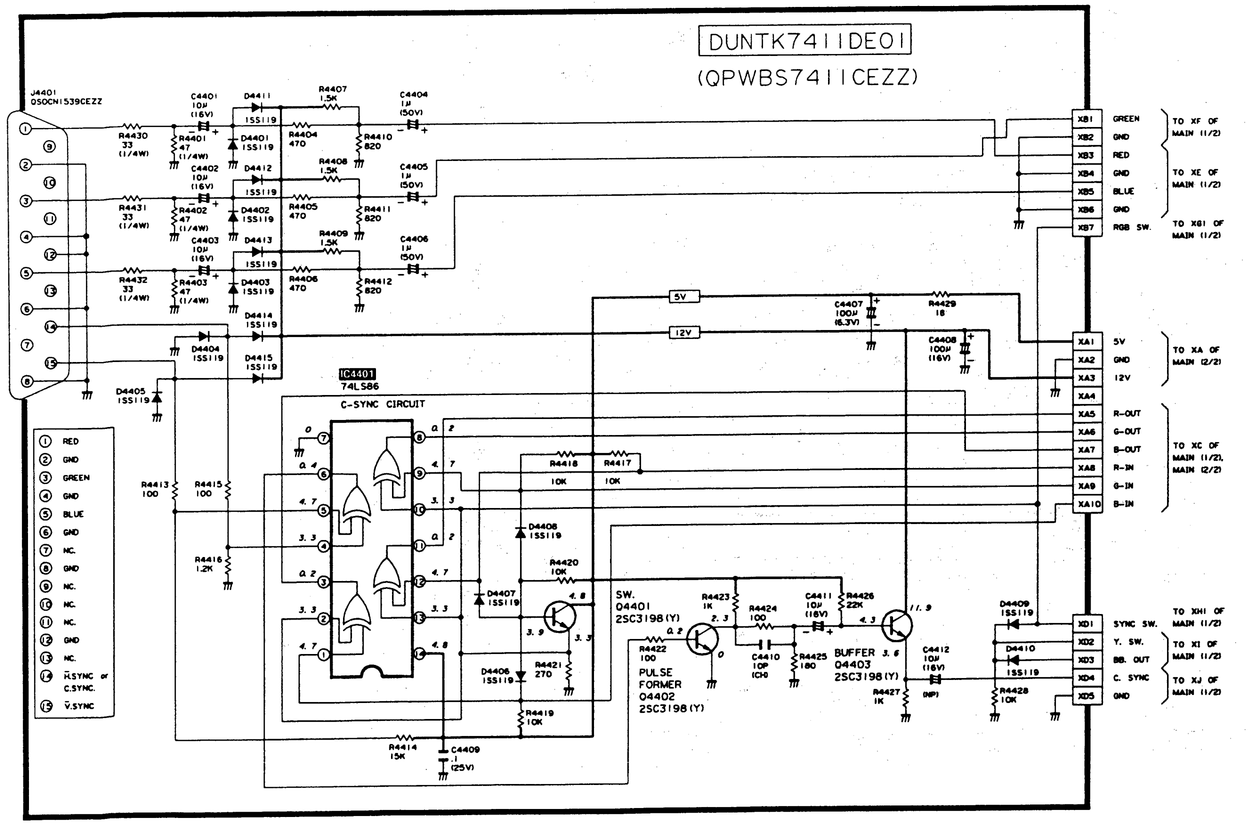
SCHEMATIC DIAGRAM: POWER UNIT


(PRIMARY)
(SECONDARY)
IC1 M67209
Q1
Q2
Q3
IC1
R2
R3
R4
R5
R6
R7
R8
R9
D2
D3
D4
DZ1
C12 .001
R14 18K
R39 180K
C13 .047
R15 3.9K
C14 .068
PC1 TLP621-2
SCR1 CR02AM-6
R13 1K
C11 4.7μ (50V)
R4 27K (1W)
R3 27K (1W)
T1 PTTN31
R22 560
R24 2.7K
VR2 5K
Q5 2SC945
C33 .047
R23 4.7K
R25 4.7K
ZD4 RD6.2ESAB2
R21 2.7K
R33 100
ZD5 RD20ESAB1
R34 1K
C15 47μ (35V)
R16 150 (1/2W)
ZD1 RD13ESAB2
C21 10μ (16V)
13V
D6 ERA18-02
IC2 M5F78M09L
L2 SBC-05
12V(1)
9V
DS2 ESAB92M-02
C22 2200μ (16V)
C23 470μ (16V)
C24 47μ (16V)
IC3 μPC2405HF
D7 ERB81-004
R40 220
5V(1)
C26 330μ (16V)
C16 470μ (16V)
D13 ERA81-004
C17 220μ (25V)
IC7 μPC79M08HF
-8V
C27 47μ (16V)
D8 ERA18-02
C29 1μ (50V)
ZD2 RD11ESAB2
ZD3 RD10ESAB2
C18 47μ (35V)
-12V
IC6 μPC79N12H
C28 47μ (16V)
R32 6.8
D9 ERA18-02
R30 220 (1/2W)
R31 220 (1/2W)
-21V
IC4 μPC7812HF-1
D10 15DF2
12V(2)
C19 2200μ (25V)
C30 100μ (16V)
D11 30DF2
R35 220
Q6 2SB1038
R36 12K
C31 1μ (50V)
C32 100μ (16V)
5V(2)
R37 4.3K
VR3 3K
C20 1000μ (16V)
IC5 M5237L
PA1 +13V
PA2 +12V (1)
PA3 9V
PA4 5V (1)
PA5 GND
PA6 GND
PA7 -8V
PA8 -12V
PA9 -21V
TO PA OF MAIN (2/2)
PC1 12V (2)
PC2 GND
TO PC OF MAIN (1/2)
PB1 12V (3)
PB2 5V (2)
PB3 D. GND
PB4 A. GND
TO PB OF DIGITAL
TO P03 OF RELAY UNIT
TO P01 OF RELAY UNIT
(HOT) H
(COLD) C
F1 2A 125V
L1 ELF18D-216
C3 .001 (125V)
C2 .1 (250V)
C37 .1 (250V)
C4 .001 (125V)
DS1 D2SB60
R2 1 (2W)
C6 180μ (250V)
C10 100P (1KV)
R5 330K (1/2W)
C7 .01 (250V)
R6 47K (2W)
C8 100P (1KV)
D1 ERA22-06
Q1 2SC4518
D5 D1NL20
C36 .001
Q2 2SC2655
R12 4.7K
D4 1SS55
R11 470 (1/2W)
R7 18 (1/2W)
D3 ERA18-02
C9 .1
R10 10 (1W)
R9 10 (1W)
C5 4700P (125V)
R1 3.9M (1/2W)
C34 4700P (125V)
C35 4700P (125V)
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12

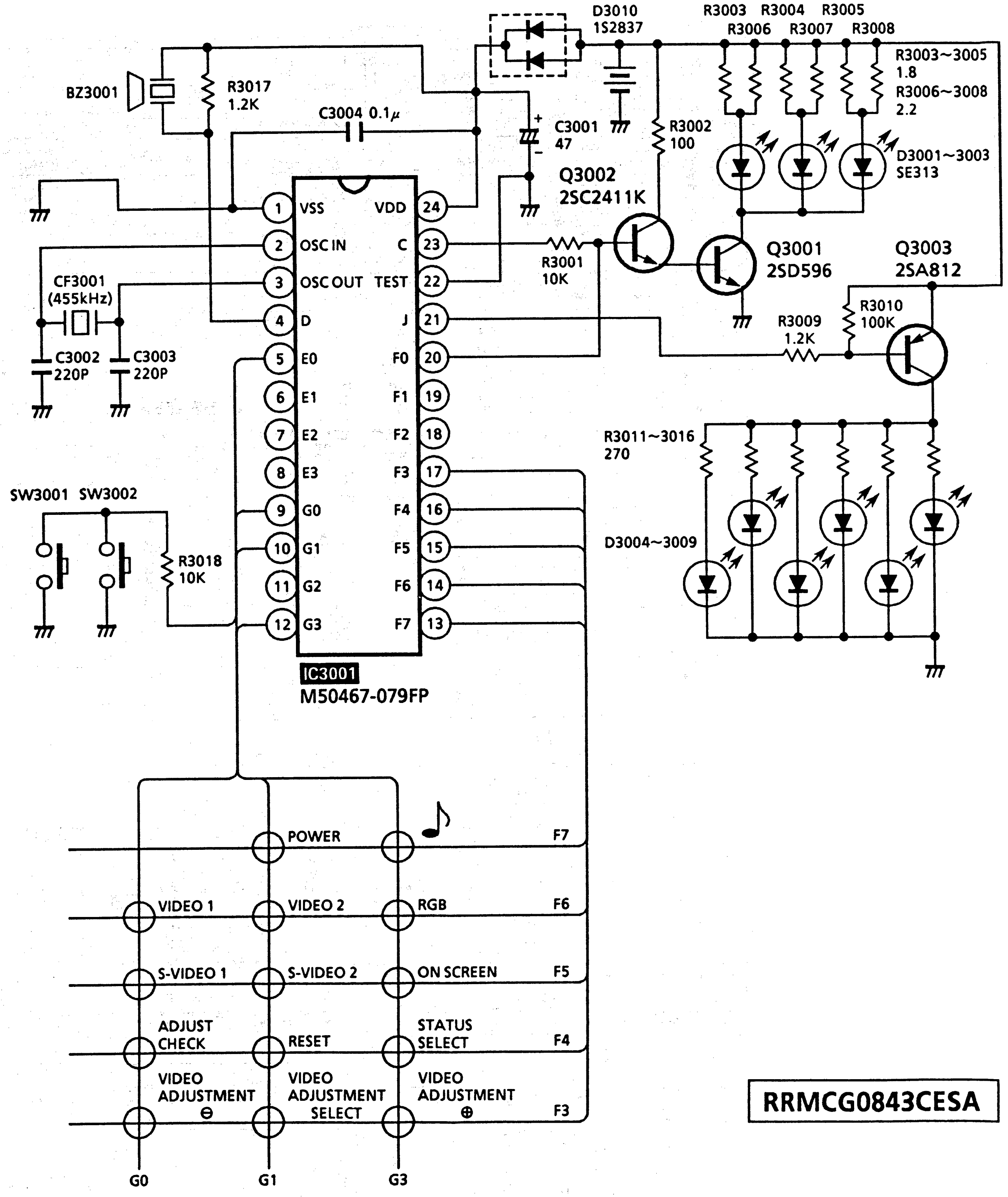
SCHEMATIC DIAGRAM: RELAY UNIT


(PRIMARY)
(SECONDARY)
AC CORD QACCU5008CEZZ
BM701 RBIM-0001CEZZ
AC1 AC2 AC3 AC4
(COLD)
(HOT)
VS1 ENB4010-14
C55 .1 (250V)
F51 5A 125V
L51 N840
T51 PT2690
D51 11ES1
D52 11ES1
D53 11ES1
D54 11ES1
IC51 M5F78M12
21.4
11.9
0
C51 1000μ (35V)
C53 47μ (16V)
AB1 AB2 AB3
PL1 LAMP INPUT
PL2 GND
TO D OF BALLAST UNIT
BU1 LAMP INPUT
BU2 GND
BU3 BU 12V
BU4 POWER (1)
BU5 POWER (2)
BU6 GND
TO BU OF MAIN (1/2)
RY51 DG12D1-0R8
RY52 DG12D1-0R8
D55 1SS53
D56 1SS53
Q51 BA1A4M
Q52 BA1A4M
5.0
0.3
TO K702 OF BALLAST UNIT
TO K701 OF BALLAST UNIT
BA1 BA2 BA3
AC FAN NFANR0025CE00
FA1 FA2 FA3 FA4
C54 .047
TO C OF POWER UNIT
TO H OF POWER UNIT
PO1 PO2 PO3

RELAY UNIT


DUNTK7411DE01
(QPWBS7411CEZZ)
J4401 QSOCN1539CEZZ
R4430 33 (1/4W)
R4431 33 (1/4W)
R4432 33 (1/4W)
R4401 47 (1/4W)
R4402 47 (1/4W)
R4403 47 (1/4W)
C4401 10μ (16V)
C4402 10μ (16V)
C4403 10μ (16V)
D4411 1SS119
D4412 1SS119
D4413 1SS119
D4414 1SS119
D4415 1SS119
D4401 1SS119
D4402 1SS119
D4403 1SS119
D4404 1SS119
D4405 1SS119
R4407 1.5K
R4408 1.5K
R4409 1.5K
R4404 470
R4405 470
R4406 470
R4410 820
R4411 820
R4412 820
C4404 1μ (50V)
C4405 1μ (50V)
C4406 1μ (50V)
XB1 GREEN
XB2 GND
XB3 RED
XB4 GND
XB5 BLUE
XB6 GND
XB7 RGB SW.
TO XF OF MAIN (1/2)
TO XE OF MAIN (1/2)
TO XG1 OF MAIN (1/2)
5V
12V
C4407 100μ (6.3V)
R4429 18
C4408 100μ (16V)
XA1 5V
XA2 GND
XA3 12V
XA4
XA5 R-OUT
XA6 G-OUT
XA7 B-OUT
XA8 R-IN
XA9 G-IN
XA10 B-IN
TO XA OF MAIN (2/2)
TO XC OF MAIN (1/2), MAIN (2/2)
IC4401 74LS86
C-SYNC CIRCUIT
R4413 100
R4415 100
R4416 1.2K
R4418 10K
R4417 10K
D4408 1SS119
D4407 1SS119
D4406 1SS119
R4420 10K
R4421 270
R4419 10K
R4414 15K
C4409 .1 (25V)
SW. Q4401 2SC3198(Y)
PULSE FORMER Q4402 2SC3198(Y)
BUFFER Q4403 2SC3198(Y)
R4422 100
R4423 1K
R4424 100
C4410 10P (CH)
R4425 180
C4411 10μ (16V)
R4426 22K
C4412 10μ (16V) (NP)
R4427 1K
D4409 1SS119
D4410 1SS119
R4428 10K
XD1 SYNC SW.
XD2 Y. SW.
XD3 BB. OUT
XD4 C. SYNC
XD5 GND
TO XH1 OF MAIN (1/2)
TO XI OF MAIN (1/2)
TO XJ OF MAIN (1/2)
① RED
② GND
③ GREEN
④ GND
⑤ BLUE
⑥ GND
⑦ NC.
⑧ GND
⑨ NC.
⑩ NC.
⑪ NC.
⑫ GND
⑬ NC.
⑭ H̄SYNC or C.SYNC.
⑮ V̄.SYNC

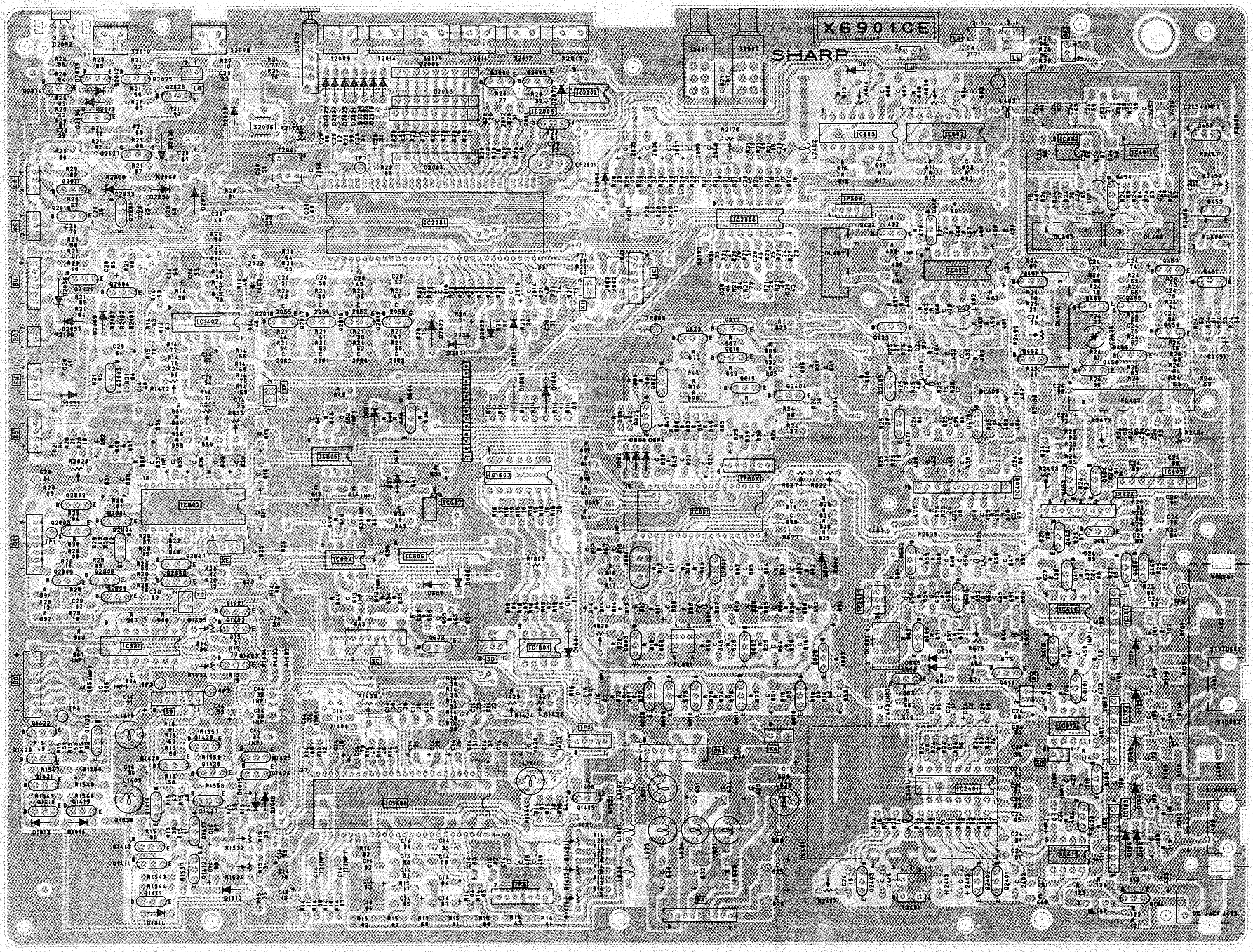
SCHEMATIC DIAGRAM: REMOTE CONTROL UNIT


BZ3001
R3017 1.2K
C3004 0.1μ
D3010 1S2837
C3001 47
R3002 100
Q3002 2SC2411K
R3001 10K
Q3001 2SD596
Q3003 2SA812
R3003 R3004 R3005
R3006 R3007 R3008
R3003~3005 1.8
R3006~3008 2.2
D3001~3003 SE313
R3009 1.2K
R3010 100K
R3011~3016 270
D3004~3009
CF3001 (455kHz)
C3002 220P
C3003 220P
SW3001 SW3002
R3018 10K
IC3001 M50467-079FP
1 VSS
2 OSC IN
3 OSC OUT
4 D
5 E0
6 E1
7 E2
8 E3
9 G0
10 G1
11 G2
12 G3
24 VDD
23 C
22 TEST
21 J
20 F0
19 F1
18 F2
17 F3
16 F4
15 F5
14 F6
13 F7
POWER
F7
VIDEO 1
VIDEO 2
RGB
F6
S-VIDEO 1
S-VIDEO 2
ON SCREEN
F5
ADJUST CHECK
RESET
STATUS SELECT
F4
VIDEO ADJUSTMENT ⊖
VIDEO ADJUSTMENT SELECT
VIDEO ADJUSTMENT ⊕
F3
G0
G1
G3

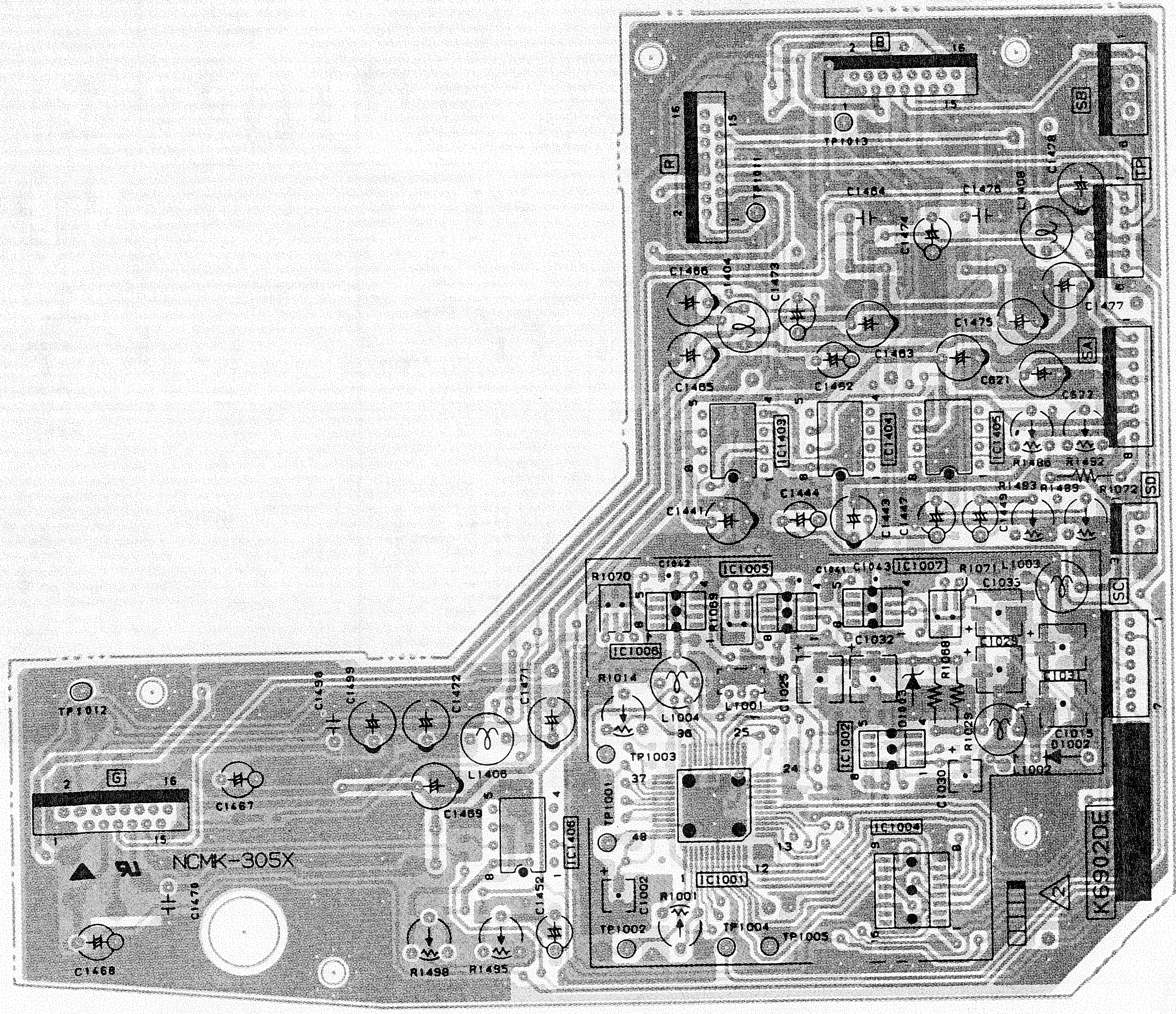
RRMCG0843CESA

PRINTED WIRING BOARD ASSEMBLIES

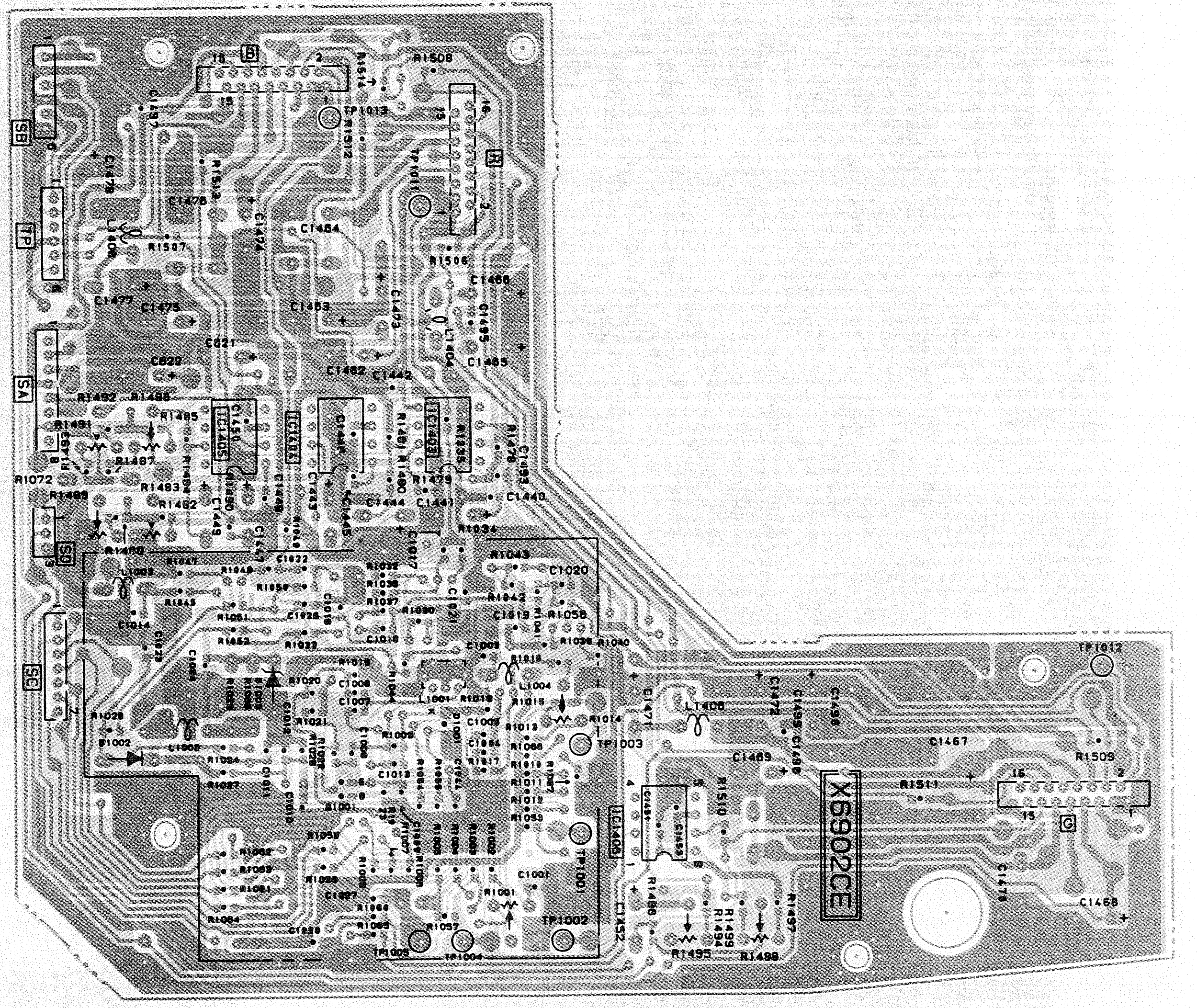
(All the PWB's here are shown as viewed from their wiring sides.)


X6901CE
SHARP
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12

MAIN UNIT


NCMK-305X
K6902DE
IC1001
IC1002
IC1004
IC1005
IC1006
IC1007
IC1403
IC1404
IC1405
IC1406
TP1001
TP1002
TP1003
TP1004
TP1005
TP1012
TP1013
SA
SB
SC
SD
TP
R
G
B

SUB UNIT (Parts Side)


X6902CE
TP1001
TP1002
TP1003
TP1004
TP1005
TP1012
TP1013
IC1406
SA
SB
SC
SD
TP
R
G
B

SUB UNIT (Parts Side)

H

G

F

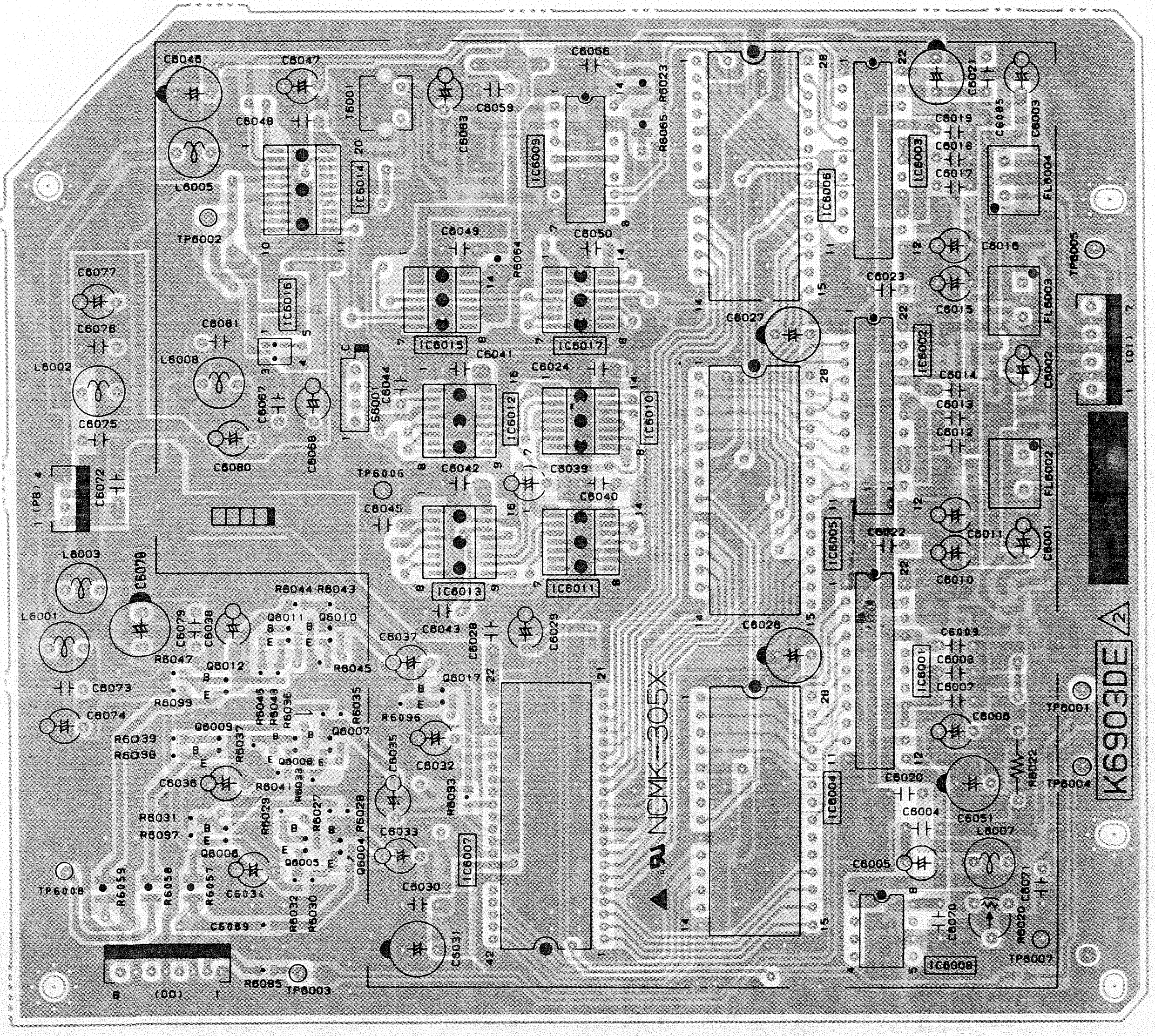
E

D

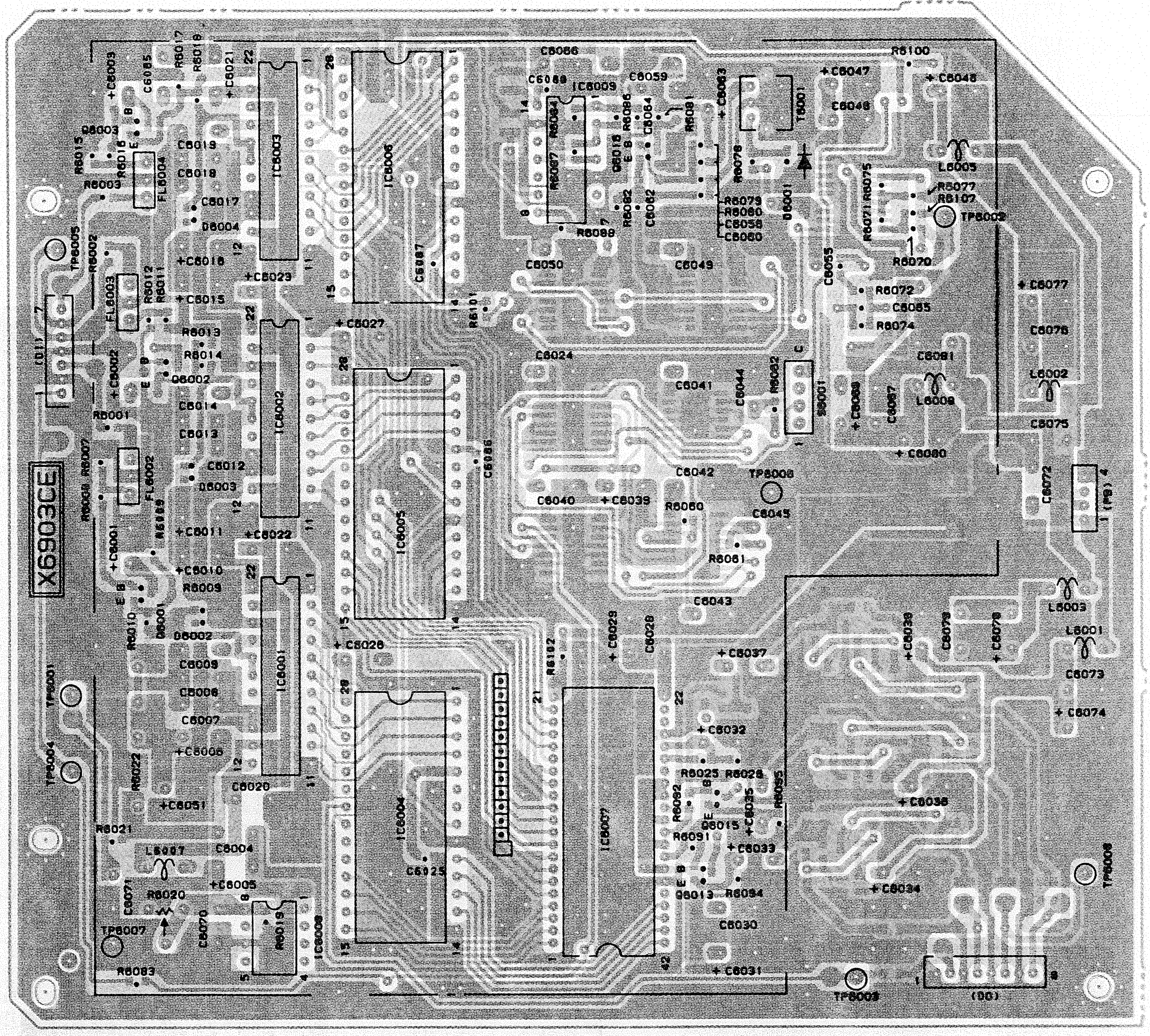
C

B

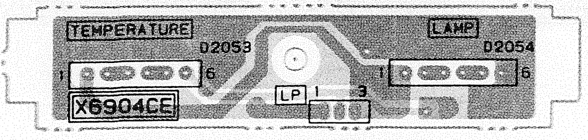
A


K6903DE
NCMK-305X

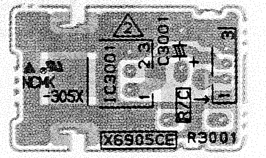
DIGITAL UNIT (Parts Side)



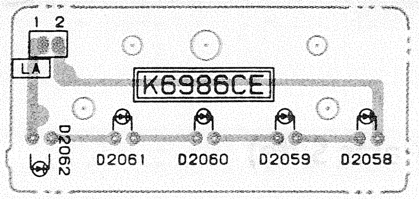
DIGITAL UNIT (Solder Side)


TEMPERATURE
LAMP
D2053
D2054
X6904CE
LP

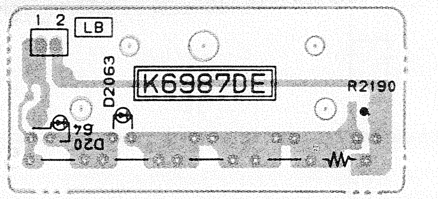
LED UNIT


NCMK-305X
IC3001
C3001
X6905CE
R3001

R/C UNIT

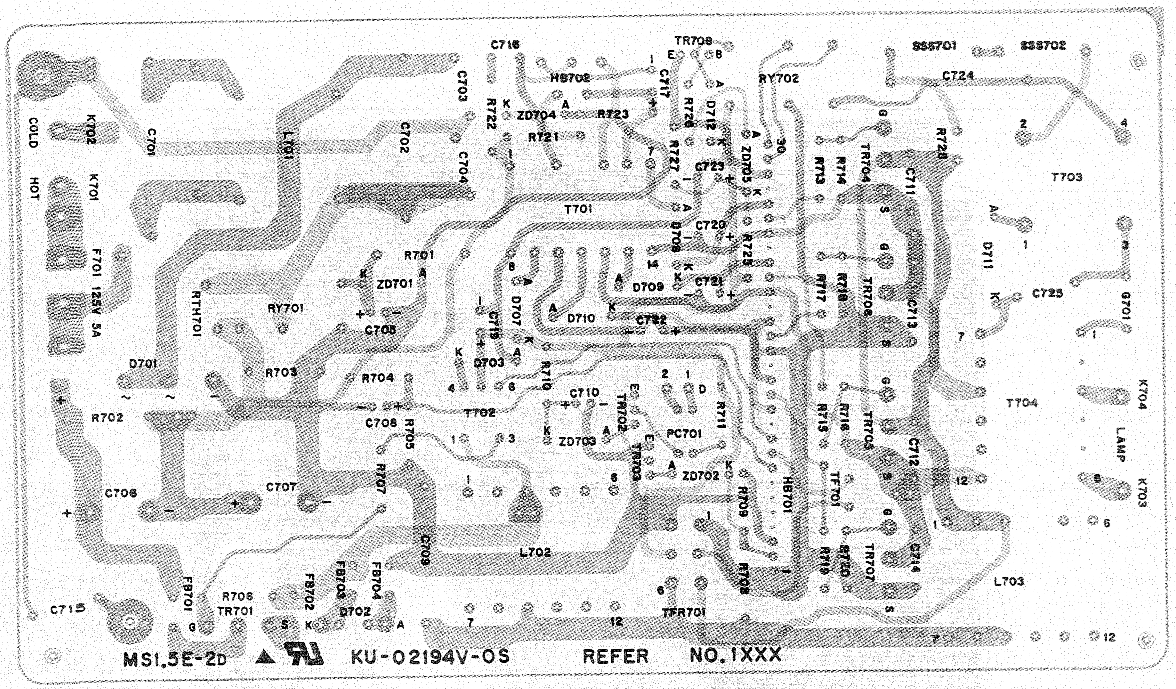

LA
K6986CE
D2062
D2061
D2060
D2059
D2058

LIGHT UP UNIT (1)

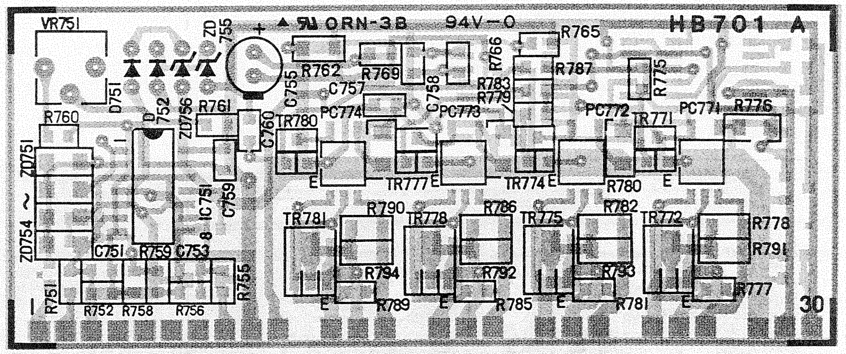

LB
K6987DE
D2063
D2064
R2190

LIGHT UP UNIT (2)

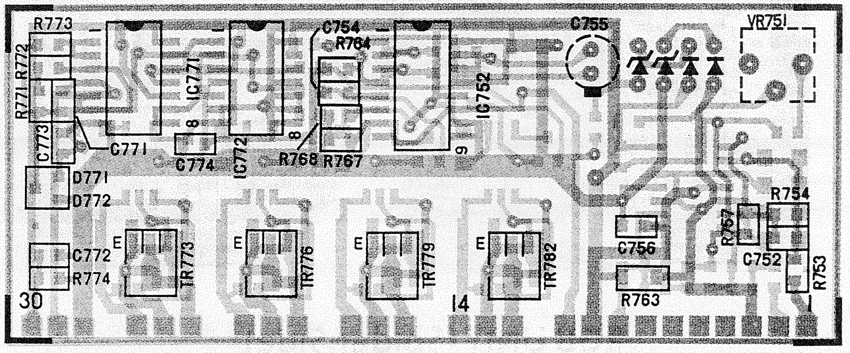
1 2 3 4 5 6 7 8 9 10 11 12


MS1.5E-2D
KU-02194V-OS
REFER NO.1XXX
F701 125V 5A
COLD
HOT
T701
T702
T703
T704
L701
L702
L703
RY701
RY702
PC701
HB701
HB702
SSS701
SSS702
LAMP

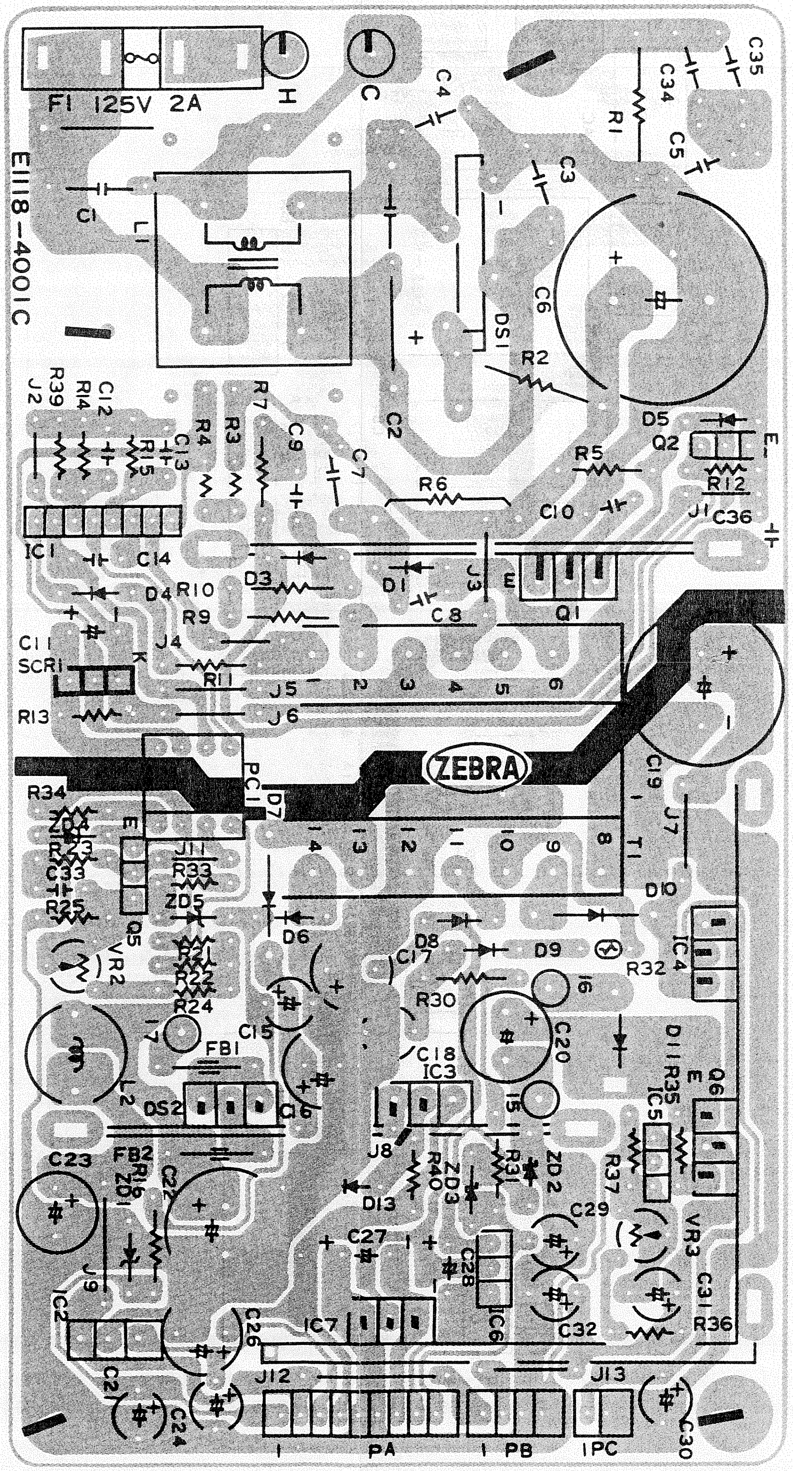
BALLAST UNIT


HB701 A
ORN-3B 94V-0
VR751
30

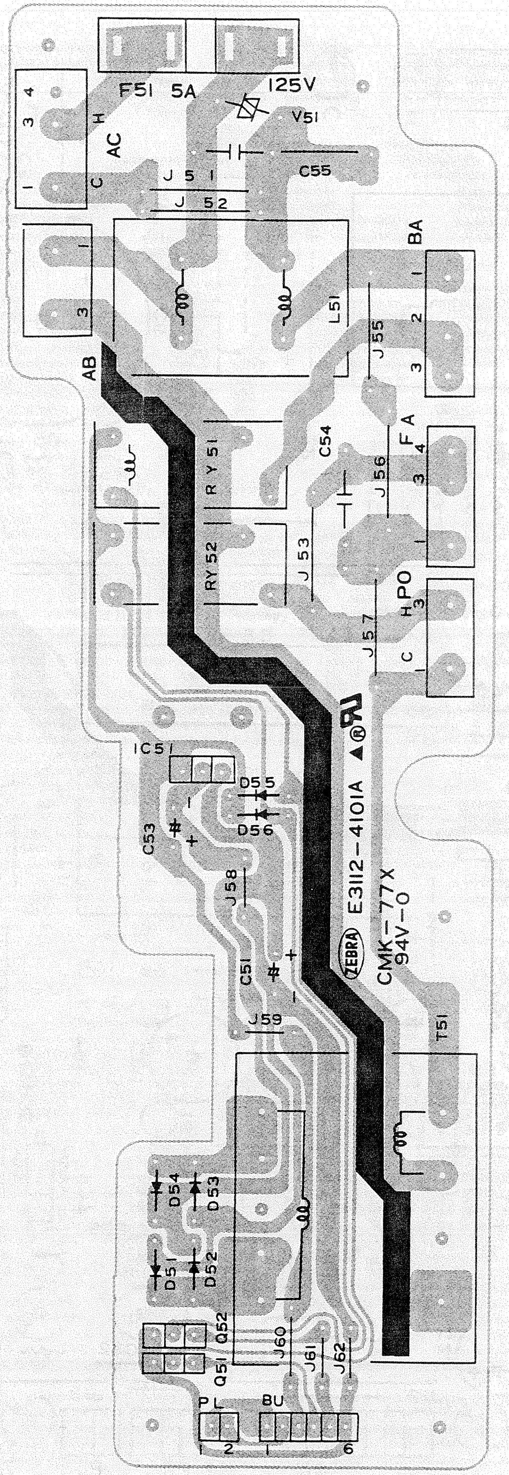
BALLAST UNIT (Parts Side)


VR751
IC771
IC772
IC752
30
14

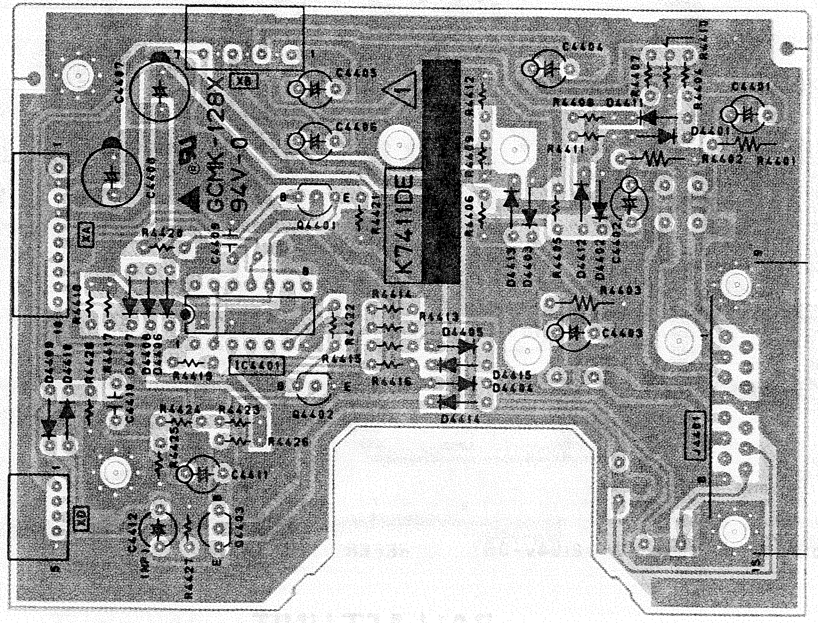
BALLAST UNIT (Solder Side)


F1 125V 2A
E1118-4001C
ZEBRA
T1
L1
L2
PA
PB
PC
J12
J13

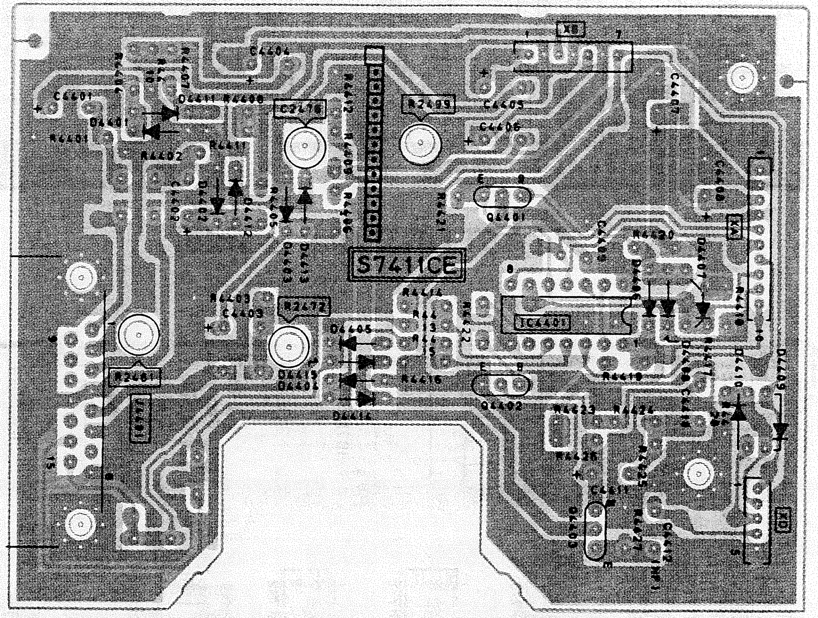
POWER UNIT


F51
5A
125V
V51
AC
H
C
J51
J52
C55
BA
AB
L51
J55
RY51
RY52
C54
FA
J56
J53
HPO
J57
IC51
D55
D56
C53
J58
C51
J59
T51
E3112-4101A
CMK-77X
94V-0
D54
D53
D51
D52
Q51
Q52
J60
J61
J62
PL
BU

RELAY UNIT


GCMK-128X
94V-0
K7411DE
IC4401
Q4401
Q4402
Q4403
C4401
C4403
C4404
C4405
C4406
C4411
C4412
D4401
D4414
D4415
R4401
R4402
R4403

RGB UNIT (Parts Side)


S7411CE
IC4401
Q4401
Q4402
C4401
C4404
C4405
C4406
R4401
R4402
R2461
R2472
R2493
C2476
D4401
D4414
D4415

RGB UNIT (Solder Side)

H
G
F
E
D
C
B
A

1 2 3 4 5 6 7 8 9 10 11 12

REPLACEMENT PARTS LIST

SAFETY NOTE —Components marked with a(⚠) have special characteristics important to safety. Before replacing any of these components, read carefully the SAFETY NOTICE on page 2 of the Service Manual.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

1. MODEL NO.
2. REF. NO.
3. PART NO.
4. DESCRIPTION

Contact your nearest SHARP Parts Distributor to order.
For location of SHARP Parts Distributor,
Please call Toll-Free; 800-447-4700

★MARK: SPARE PARTS-DELIVERY SECTION

PRINTED WIRING BOARD ASSEMBLIES
(NOT REPLACEMENT ITEM)

Ref. No.	Part No.	★	Description	Code
	DUNTK6901DE53	–	Main Unit	—
	DUNTK6902DE03	–	Sub Unit	—
	DUNTK6903DE03	–	Digital Unit	—
	DUNTK6904DE03	–	LED Unit	—
	DUNTK6905DE03	–	R/C Unit	—
	DUJTK6986DE03	–	Light Up (1) Unit	—
	DUNTK6987DE03	–	Light Up (2) Unit	—
	DUNTK7411DE01	–	RGB Unit	—
	RDENC0032CEZZ	–	Ballast Unit	—
	RDENC0033CEZZ	–	Power Unit	—

ASSEMBLY UNITS

ASSEMBLY UNIT

Ref. No.	Part No.	★	Description	Code
	RUNTK0320CEZZ	J	Relay Unit	BD

NOTE: THE PARTS HERE SHOWN ARE SUPPLIED AS AN ASSEMBLY BUT NOT INDEPENDENTLY.

Ref. No.	Part No.	★	Description	Code
	RUNTK0297CEZZ	J	G LCD Panel Unit	**
	RUNTK0298CEZZ	J	R LCD Panel Unit	**
	RUNTK0299CEZZ	J	B LCD Panel Unit	**

DUNTK6901DE53
MAIN UNIT

INTEGRATED CIRCUITS

Ref. No.	Part No.	★	Description	Code
IC101	VHiTA7347P/-1	J	TA7347P	AG
IC102	VHiTA7347P/-1	J	TA7347P	AG
IC103	VHiTA7347P/-1	J	TA7347P	AG
IC401	VHiCXL5502M-1	J	CXL5502M	AQ
IC402	VHiCXL5504M-1	J	CXL5504M	AP
IC403	VHiCXA1413L-1	J	CXA1413L	AN
IC406	VHiNJM2245D-1	J	NJM2245D	AE
IC407	VHiPA0030//-1	J	PA0030	AP
IC408	VHiM51494L/-1	J	M51494L	AK
IC411	VHiNJM2245D-1	J	NJM2245D	AE
IC412	VHiNJM2245D-1	J	NJM2245D	AE
IC602	VHiTC4538AP-1	J	TC74HC4538AP	AH
IC603	VHiTC4538AP-1	J	TC74HC4538AP	AH
IC604	VHiNJM2246D-1	J	NJM2246D	AE
IC605	VHiNJM2246D-1	J	NJM2246D	AE
IC606	RH-iX1426CEZZ	J	TC74HC04AF	AC
IC607	VHiTC4S584F-1	J	TC4S584F	AD
IC801	RH-iX1311CEZZ	J	TA8601CN	AR
IC802	RH-iX0996CEZZ	J	iR3P32A1	AT
IC901	RH-iX0607CEZZ	J	LA7220	AK
IC1401	RH-iX1640CEZZ	J	M52033SP	AX
IC1402	VHiNJM2902N-1	J	NJM2902N	AD
IC1601	VHiLF353N//-1	J	LF353N	AH
IC1602	VHiNJM2902N-1	J	NJM2902N	AD
IC2001	RH-iX1639CEN1	J	M37102M8-770SP	BA
IC2002	RH-iX1636CEZZ	J	CAT93C46HP	AL
IC2005	VHiPST529C2-1	J	PST529C	AD
IC2006	VHiNJM2902N-1	J	NJM2902N	AD
IC2401	RH-iX1299CEN1	J	PA0024A	AQ

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q101	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q103	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q104	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q416	VS2SC3399//-1	J	2SC3399	AB
Q417	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q418	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q420	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q423	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q424	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q451	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q452	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q453	VS2SA1266-Y-1	J	2SA1266 (Y)	AA
Q454	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q455	VS2SC3198-G-1	J	2SC3198 (G)	AA
Q456	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q457	VS2SC3198-G-1	J	2SC3198 (G)	AA
Q458	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q459	VS2SC3198-Y-1	J	2SC3198(Y)	AA

DUNTK6901DE53
MAIN UNIT (Continued)

TRANSISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
Q460	VS2SC3198-G-1	J	2SC3198 (G)	AA
Q461	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q462	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q463	VS2SC3198-G-1	J	2SC3198 (G)	AA
Q464	VS2SC3198-G-1	J	2SC3198 (G)	AA
Q465	VS2SA1266-Y-1	J	2SA1266 (Y)	AA
Q466	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q467	VS2SC3198-G-1	J	2SC3198 (G)	AA
Q468	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q470	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q471	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q603	VS2SC3399//-1	J	2SC3399	AB
Q604	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q606	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q607	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q608	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q609	VS2SA1266-Y-1	J	2SA1266 (Y)	AA
Q610	VS2SA1266-Y-1	J	2SA1266 (Y)	AA
Q802	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q803	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q808	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q809	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q810	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q811	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q815	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q816	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q817	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q818	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q820	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q823	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q824	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q825	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q1401	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q1402	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q1403	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q1405	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q1411	VS2SC1815GW-1	J	2SC1815(GW)	AB
Q1412	VS2SA1015GW-1	J	2SA1015(GW)	AC
Q1413	VS2SA1266-Y-1	J	2SA1266 (Y)	AA
Q1414	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q1416	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q1417	VS2SA1266-Y-1	J	2SA1266 (Y)	AA
Q1418	VS2SC1815GW-1	J	2SC1815(GW)	AB
Q1419	VS2SA1015GW-1	J	2SA1015(GW)	AC
Q1420	VS2SA1266-Y-1	J	2SA1266 (Y)	AA
Q1421	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q1422	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q1423	VS2SA1266-Y-1	J	2SA1266 (Y)	AA
Q1424	VS2SC1815GW-1	J	2SC1815(GW)	AB
Q1425	VS2SA1015GW-1	J	2SA1015(GW)	AC
Q1426	VS2SA1266-Y-1	J	2SA1266 (Y)	AA

TRANSISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
Q1427	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q1428	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q1429	VS2SA1266-Y-1	J	2SA1266 (Y)	AA
Q2001	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q2003	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q2004	VS2SC383-WT-1	J	2SC383 (WT)	AE
Q2005	VS2SA1266-Y-1	J	2SA1266 (Y)	AA
Q2006	VS2SA1266-Y-1	J	2SA1266 (Y)	AA
Q2010	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q2011	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q2012	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q2013	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q2016	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q2017	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q2018	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q2019	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q2024	VS2SC3402//-1	J	2SC3402	AB
Q2025	VS2SA1307Y/-1	J	2SA1307 (Y)	AG
Q2026	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q2027	VS2SA1266-Y-1	J	2SA1266 (Y)	AA
Q2401	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q2402	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q2403	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q2404	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q2405	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q2801	VS2SA1266-Y-1	J	2SA1266 (Y)	AA
Q2802	VS2SA1266-Y-1	J	2SA1266 (Y)	AA
Q2803	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q2804	VS2SA1266-Y-1	J	2SA1266 (Y)	AA
Q2805	VS2SA1266-Y-1	J	2SA1266 (Y)	AA
Q2806	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q2807	VS2SA1266-Y-1	J	2SA1266 (Y)	AA
Q2808	VS2SA1266-Y-1	J	2SA1266 (Y)	AA
Q2809	VS2SC3198-Y-1	J	2SC3198(Y)	AA

DIODES

Ref. No.	Part No.	★	Description	Code
D101	RH-EX0200CEZZ	J	Zener Diode, 12V	AB
D102	RH-EX0200CEZZ	J	Zener Diode, 12V	AB
D103	RH-EX0200CEZZ	J	Zener Diode, 12V	AB
D104	RH-EX0200CEZZ	J	Zener Diode, 12V	AB
D105	RH-EX0200CEZZ	J	Zener Diode, 12V	AB
D106	RH-EX0200CEZZ	J	Zener Diode, 12V	AB
D605	VHD1SS119//-1	J	1SS119	AB
D606	VHD1SS119//-1	J	1SS119	AB
D607	VHD1SS119//-1	J	1SS119	AB
D608	VHD1SS119//-1	J	1SS119	AB
D609	VHD1SS119//-1	J	1SS119	AB
D610	VHD1SS119//-1	J	1SS119	AB
D611	VHD1SS119//-1	J	1SS119	AB
D801	RH-EX0223CEZZ	J	Zener Diode, 7.5V	AB
D802	VHD1SS119//-1	J	1SS119	AB
D803	VHD1SS119//-1	J	1SS119	AB

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DIODES (Continued)

Ref. No.	Part No.	★	Description	Code
D804	VHD1SS119//-1	J	1SS119	AB
D1011	VHD1SS119//-1	J	1SS119	AB
D1012	VHD1SS119//-1	J	1SS119	AB
D1013	VHD1SS119//-1	J	1SS119	AB
D1014	VHD1SS119//-1	J	1SS119	AB
D1015	VHD1SS119//-1	J	1SS119	AB
D1016	VHD1SS119//-1	J	1SS119	AB
D1601	VHD1SS119//-1	J	1SS119	AB
D1602	VHD1SS119//-1	J	1SS119	AB
D1603	VHD1SS119//-1	J	1SS119	AB
D2015	VHD1SS119//-1	J	1SS119	AB
D2019	VHD1SS119//-1	J	1SS119	AB
D2020	VHD1SS119//-1	J	1SS119	AB
D2021	VHD1SS119//-1	J	1SS119	AB
D2022	VHD1SS119//-1	J	1SS119	AB
D2023	VHD1SS119//-1	J	1SS119	AB
D2024	VHD1SS119//-1	J	1SS119	AB
D2025	VHD1SS119//-1	J	1SS119	AB
D2028	VHD1SS119//-1	J	1SS119	AB
D2029	VHD1SS119//-1	J	1SS119	AB
D2031	VHD1SS119//-1	J	1SS119	AB
D2034	VHD1SS119//-1	J	1SS119	AB
D2039	VHD1SS119//-1	J	1SS119	AB
D2055	VHD1SS119//-1	J	1SS119	AB
D2057	VHD1SS119//-1	J	1SS119	AB
D2068	VHD1SS119//-1	J	1SS119	AB
D2069	VHD1SS119//-1	J	1SS119	AB
D2070	VHD1SS119//-1	J	1SS119	AB
D2071	VHD1SS119//-1	J	1SS119	AB
D2033	RH-EX0020GEZZ	J	Zener Diode, 5.1V	AE
D2035	RH-EX0020GEZZ	J	Zener Diode, 5.1V	AE
D2052	RH-PX0276CEZZ	J	LED	AC
D2056	RH-EX0045TAZZ	J	Zener Diode, 10V	AB
D2072	RH-EX0138CEZZ	J	Zener Diode	AB
TH3001	RH-HZ0017CEZZ	J	Thermistor	AN

PACKAGED CIRCUITS

Ref. No.	Part No.	★	Description	Code
C2004	RMPTE0072CEZZ	J	Capacitor Array	AE
D2005	RMPTJ0098CEZZ	J	Diode Array	AE
D2006	RMPTJ0099CEZZ	J	Diode Array	AE
FL404	RMPTD0011CEZZ	J	Filter	AE
R2156	RMPTC0208CEZZ	J	Resistor Array	AB
X801	RCRSB0069CEZZ	J	Crystal	AG

COILS AND TRANSFORMERS

Ref. No.	Part No.	★	Description	Code
CF801	RFiLA0034CEZZ	J	Ceramic Filter	AD
CF2001	RFiLC0091GEZZ	J	Ceramic Filter	AD

COILS AND TRANSFORMERS (Continued)

Ref. No.	Part No.	★	Description	Code
CF801	RFiLA0034CEZZ	J	Ceramic Filter	AD
CF2001	RFiLC0091GEZZ	J	Ceramic Filter	AD
DL101	RCiLZ0585CEZZ	J	Delay Line	AE
DL401	RCiLZ0682CEZZ	J	Delay Line	AS
DL402	RCiLZ0733CEZZ	J	Delay Line	AH
DL404	RCiLZ0732CEZZ	J	Delay Line	AF
DL405	RCiLZ0732CEZZ	J	Delay Line	AF
DL406	RCiLZ0637CEZZ	J	Delay Line	AE
DL407	RCiLZ0691CEZZ	J	Delay Line	AF
DL601	RCiLZ0745CEZZ	J	Delay Line	AE
FL403	RCiLF0171CEZZ	J	Coil	AL
FL801	RCiLV0163CEZZ	J	Coil	AE
L402	VP-MK8R2K0000	J	8.2μH	AB
L403	VP-MK220K0000	J	22μH	AB
L621	PCiLF0174CEZZ	J	Coil	AC
L622	RCiLF0122CEZZ	J	Coil	AC
L623	PCiLF0174CEZZ	J	Coil	AC
L624	RCiLF0122CEZZ	J	Coil	AC
L630	PCiLF0174CEZZ	J	Coil	AC
L631	RCiLF0122CEZZ	J	Coil	AC
L1401	RCiLF0122CEZZ	J	Coil	AC
L2402	VP-MK220K0000	J	22μH	AB
L1402	RCiLF0122CEZZ	J	Coil	AC
L1409	RCiLF0122CEZZ	J	Coil	AC
L1410	RCiLF0122CEZZ	J	Coil	AC
L1411	RCiLF0122CEZZ	J	Coil	AC
L627	VP-MK330K0000	J	33μH	AB
L628	VP-MK330K0000	J	33μH	AB
L801	VP-MK680K0000	J	68μH	AB
L2401	VP-XF150K0000	J	15μH	AB
L2403	VP-MK390K0000	J	39μH	AB
T2001	RCiLB0027CEZZ	J	Coil	AD
T2401	RCiLi0529CEZZ	J	IF Coil	AD

CONTROLS

Ref. No.	Part No.	★	Description	Code
R609	RVR-M4476GEZZ	J	2.2k(B) H. BLK Phase	AC
R614	RVR-M4476GEZZ	J	2.2k(B) Clamp Pulse Phase	AC
R675	RVR-M4478GEZZ	J	4.7k(B) Tint	AC
R820	RVR-M4478GEZZ	J	4.7k(B) APC	AC
R822	RVR-M4480GEZZ	J	10k(B) Color	AC
R827	RVR-M4480GEZZ	J	10k(B) Tint	AC
R855	RVR-M4480GEZZ	J	10k(B) Video	AC
R857	RVR-M4480GEZZ	J	10k(B) Contrast	AC
R1414	RVR-M4480GEZZ	J	10k(B) Green Sub Bias	AC
R1417	RVR-M4480GEZZ	J	10k(B) Red Sub Bias	AC
R1421	RVR-M4480GEZZ	J	10k(B) Blue Sub Bias	AC
R1424	RVR-M4478GEZZ	J	4.7k(B) γ Gain	AC
R1426	RVR-M4478GEZZ	J	4.7k(B) γ Position	AC
R1435	RVR-M4477GEZZ	J	3.3k(B) White Balance	AC
R1437	RVR-M4477GEZZ	J	3.3k(B) White Balance	AC
R1472	RVR-M4480GEZZ	J	10k(B) Sub Contrast	AC

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CONTROLS (Continued)

Ref. No.	Part No.	★	Description	Code
R1532	RVR-M4480GEZZ	J	10k(B) Clip Level	AC
R1534	RVR-M4480GEZZ	J	10k(B) Clip Level	AC
R1603	RVR-M4477GEZZ	J	3.3k(B) AGC	AC
R2178	RVR-M4480GEZZ	J	10k(B) Sub Bright.	AC
R2417	RVR-M4468GEZZ	J	100 (B) Delay Level	AC
R2458	RVR-M4474GEZZ	J	1k (B) DCF	AC
R2461	RVR-M4474GEZZ	J	1k (B) DCF	AC
R2472	RVR-M4474GEZZ	J	1k (B) DCF	AC
R2493	RVR-M4471GEZZ	J	330(B) DCF	AC
R2499	RVR-M4474GEZZ	J	1k (B) DCF	AC
R2820	RVR-M4477GEZZ	J	3.3k(B) White Clip Level	AC

CAPACITORS

Ref. No.	Part No.	★	Description	Code
C101	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C102	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C103	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C104	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C105	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C106	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C107	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C108	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C109	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C110	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C111	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C112	VCEAAA1HW105M	J	1 50V Electrolytic	AB
C422	VCE9AA1CW106M	J	10 16 Electrolytic (N.P)	AB
C423	VCE9AA1CW106M	J	10 16 Electrolytic (N.P)	AB
C424	VCE9AA1CW106M	J	10 16 Electrolytic (N.P)	AB
C427	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C428	VCCCPA1HH150J	J	15p 50V Ceramic	AA
C429	VCCCPA1HH120J	J	12p 50V Ceramic	AA
C430	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C431	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C432	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C433	VCCCPA1HH150J	J	15p 50V Ceramic	AA
C434	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C438	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C439	VCTYPA1EF104Z	J	0.1 25V Ceramic	AB
C440	VCCCPA1HH470J	J	47p 50V Ceramic	AA
C441	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C442	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C443	VCE9AA1HW105M	J	1 50V Electrolytic (N.P)	AB
C449	VCTYPA1EF104Z	J	0.1 25V Ceramic	AB
C450	VCE9AA1CW106M	J	10 16 Electrolytic (N.P)	AB

CAPACITORS (Continued)

Ref. No.	Part No.	★	Description	Code
C451	VCTYPA1EF104Z	J	0.1 25V Ceramic	AB
C484	VCTYPA1EF104Z	J	0.1 25V Ceramic	AB
C486	VCE9AA1HW105M	J	1 50V Electrolytic (N.P)	AB
C487	VCKYPA1HB102K	J	1000p 50V Ceramic	AA
C488	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C493	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C603	VCQRBA1HA392G	J	3900P 50V Mylar	AC
C604	VCQRBA1HA472G	J	4700p 50V Mylar	AC
C605	VCQRBA1HA152G	J	1500p 50V	AC
C606	VCQRBA1HA152G	J	1500p 50V	AC
C608	VCEAGA1AW476M	J	47 10V Electrolytic	AA
C609	VCEAGA1AW476M	J	47 10V Electrolytic	AA
C612	VCE9AA1CW106M	J	10 16 Electrolytic (N.P)	AB
C613	VCE9AA1CW106M	J	10 16 Electrolytic (N.P)	AB
C614	VCE9AA1CW106M	J	10 16 Electrolytic (N.P)	AB
C615	VCE9AA1CW106M	J	10 16 Electrolytic (N.P)	AB
C623	VCEAGA1AW227M	J	220 10V Electrolytic	AB
C624	VCEAGA1AW227M	J	220 10V Electrolytic	AB
C625	VCEAGA1EW107M	J	100 25V Electrolytic	AD
C626	VCEAGA1HW107M	J	100 50V Electrolytic	AC
C627	VCEAGA1EW107M	J	100 25V Electrolytic	AD
C628	VCEAGA1CW227M	J	220 16V Electrolytic	AC
C629	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C630	VCEAGA1EW227M	J	220 25V Electrolytic	AC
C631	VCEAGA1EW227M	J	220 25V Electrolytic	AC
C632	VCEAGA1CW227M	J	220 16V Electrolytic	AC
C634	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C635	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C636	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C637	VCQYTA1HM123J	J	0.012 50V Mylar	AA
C638	VCQRBA1HA472G	J	4700p 50V Mylar	AC
C639	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C640	VCTYPA1EF104Z	J	0.1 25V Ceramic	AB
C641	VCTYPA1EF104Z	J	0.1 25V Ceramic	AB
C644	VCCCPA1HH390J	J	39p 50V Ceramic	AA
C645	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C647	VCCCPA1HH680J	J	68p 50V Ceramic	AA
C648	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C649	VCCCPA1HH820J	J	82p 50V Ceramic	AA
C650	VCKYPA1HB561K	J	560P 50V Ceramic	AA
C651	VCE9AA1CW106M	J	10 16 Electrolytic (N.P)	AB
C652	VCE9AA1HW105M	J	1 50V Electrolytic (N.P)	AB
C654	VCQYTA1HM102J	J	1000p 50V Mylar	AA
C655	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C656	VCTYPA1EF104Z	J	0.1 25V Ceramic	AB
C657	VCCCPA1HH220J	J	22p 50V Ceramic	AA
C801	VCEAGA1CW107M	J	100 16V Electrolytic	AB

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CAPACITORS (Continued)

Ref. No.	Part No.	★	Description	Code
C802	VCQYTA1HM272J	J	2700p 50V Mylar	AA
C803	VCEAAA1HW105M	J	1 50V Electrolytic	AB
C804	VCEAAA1HW105M	J	1 50V Electrolytic	AB
C805	VCQYTA1HM103J	J	0.01 50V Mylar	AA
C806	VCQYTA1HM103J	J	0.01 50V Mylar	AA
C807	VCQYTA1HM183J	J	0.018 50V Mylar	AB
C808	VCEAAA1HW106M	J	10 50V Electrolytic	AB
C809	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C810	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C811	VCQYTA1HM183J	J	0.018 50V Mylar	AB
C812	VCQYTA1HM103J	J	0.01 50V Mylar	AA
C813	VCQYTA1HM103J	J	0.01 50V Mylar	AA
C814	VCCCPA1HH330J	J	33p 50V Ceramic	AA
C815	VCE9AA1HW225M	J	2.2 50V Electrolytic (N.P)	AB
C816	VCCSPA1HL471J	J	470p 50V Ceramic	AA
C817	VCEAAA1HW105M	J	1 50V Electrolytic	AB
C818	VCEAAA1HW105M	J	1 50V Electrolytic	AB
C819	VCEAAA1HW105M	J	1 50V Electrolytic	AB
C820	VCKYPA1HB102K	J	1000p 50V Ceramic	AA
C821	VCEAGA1CW337M	J	330 16V Electrolytic	AC
C822	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C823	VCEAAA1HW474T	J	0.47 50V Electrolytic	AB
C824	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C825	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C826	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C829	VCEAAA1HW474T	J	0.47 50V Electrolytic	AB
C830	VCEAAA1HW474T	J	0.47 50V Electrolytic	AB
C831	VCEAAA1HW474T	J	0.47 50V Electrolytic	AB
C832	VCEAAA1HW474T	J	0.47 50V Electrolytic	AB
C833	VCE9AA1HW105M	J	1 50V Electrolytic (N.P)	AB
C834	VCEAAA1HW475M	J	4.7 50V Electrolytic	AA
C835	VCEAAA1HW104T	J	0.1 50V Electrolytic	AB
C836	VCEAAA1HW104T	J	0.1 50V Electrolytic	AB
C838	VCEAAA1HW474T	J	0.47 50V Electrolytic	AB
C839	VCEAAA1HW474T	J	0.47 50V Electrolytic	AB
C841	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C843	VCEAAA1HW474T	J	0.47 50V Electrolytic	AB
C844	VCEAAA1HW335M	J	3.3 50V Electrolytic	AB
C845	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C846	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C847	VCCCPA1HH120J	J	12p 50V Ceramic	AA
C851	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C852	VCEAAA1HW104T	J	0.1 50V Electrolytic	AB
C854	VCQYTA1HM103J	J	0.01 50V Mylar	AA
C855	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C904	VCE9AA1CW106M	J	10 16 Electrolytic (N.P)	AB
C905	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C906	VCE9AA1CW106M	J	10 16 Electrolytic (N.P)	AB

CAPACITORS (Continued)

Ref. No.	Part No.	★	Description	Code
C907	VCE9AA1CW106M	J	10 16 Electrolytic (N.P)	AB
C1401	VCTYPA1EF104Z	J	0.1 25V Ceramic	AB
C1402	VCCCPA1HH680J	J	68p 50V Ceramic	AA
C1403	VCEAGA1AW107M	J	100 10V Electrolytic	AB
C1404	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1405	VCEAGA1HW225M	J	2.2 50V Electrolytic	AB
C1407	VCEAAA1HW474T	J	0.47 50V Electrolytic	AB
C1408	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1409	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C1410	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1411	VCE9AA1HW105M	J	1 50V Electrolytic (N.P)	AB
C1412	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C1413	VCE9AA1HW105M	J	1 50V Electrolytic (N.P)	AB
C1414	VCE9AA1HW105M	J	1 50V Electrolytic (N.P)	AB
C1415	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1416	VCEAGA1AW107M	J	100 10V Electrolytic	AB
C1417	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1418	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1419	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1420	VCEAGA1CW477M	J	470 16V Electrolytic	AC
C1421	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1422	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1423	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1424	VCEAAA1HW105M	J	1 50V Electrolytic	AB
C1425	VCEAAA1HW105M	J	1 50V Electrolytic	AB
C1426	VCEAAA1HW105M	J	1 50V Electrolytic	AB
C1427	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1428	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1429	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1430	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1431	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1432	VCE9AA1HW105M	J	1 50V Electrolytic (N.P)	AB
C1433	VCE9AA1HW105M	J	1 50V Electrolytic (N.P)	AB
C1434	VCE9AA1HW105M	J	1 50V Electrolytic (N.P)	AB
C1435	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1437	VCEAGA1AW107M	J	100 10V Electrolytic	AB
C1438	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C1439	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C1454	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1455	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1456	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C1459	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1460	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1479	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C1480	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1481	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1482	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA

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MAIN UNIT (Continued)

CAPACITORS (Continued)

Ref. No.	Part No.	★	Description	Code
C1483	VCEAAA1HW475M	J	4.7 50V Electrolytic	AA
C1484	VCEAAA1HW225M	J	2.2 50V Electrolytic	AB
C1485	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C1486	VCCSPA1HL101J	J	100p 50V Ceramic	AA
C1487	VCEAAA1HW106M	J	10 50V Electrolytic	AB
C1488	VCEAAA1HW106M	J	10 50V Electrolytic	AB
C1490	VCEAGA1CW337M	J	330 16V Electrolytic	AC
C1491	VCEAGA1CW337M	J	330 16V Electrolytic	AC
C1492	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1494	VCKYPA1HB562K	J	5600p 50V Ceramic	AA
C1601	VCCSPA1HL331J	J	330p 50V Ceramic	AA
C1602	VCE9AA1HW105M	J	1 50V Electrolytic (N.P)	AB
C2001	VCCCPA1HH101J	J	100p 50V Ceramic	AA
C2002	VCCCPA1HH101J	J	100p 50V Ceramic	AA
C2003	VCCSPA1HL101J	J	100p 50V Ceramic	AA
C2011	VCCSPA1HL470J	J	47p 50V Ceramic	AA
C2012	VCCSPA1HL470J	J	47p 50V Ceramic	AA
C2013	VCQYTA1HM104J	J	0.1 50V Mylar	AA
C2014	VCEAGA1HW105M	J	1 50V Electrolytic	AC
C2015	VCCSPA1HL101J	J	100p 50V Ceramic	AA
C2016	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2022	VCQYTA1HM104J	J	0.1 50V Mylar	AA
C2023	VCEA2H0JW338M	J	3300 6.3V Electrolytic	AE
C2025	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C2029	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2030	VCTYPA1EF104Z	J	0.1 25V Ceramic	AB
C2031	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2034	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C2035	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C2036	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C2037	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C2038	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C2040	VCEAAA1HW105M	J	1 50V Electrolytic	AB
C2041	VCEAGA1CW228M	J	2200 16V Electrolytic	AE
C2043	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2044	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2045	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2026	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C2046	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2047	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2048	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2049	VCKYPA1HB122K	J	1200p 50V Ceramic	AA
C2050	VCKYPA1HB122K	J	1200p 50V Ceramic	AA
C2051	VCKYPA1HB122K	J	1200p 50V Ceramic	AA
C2052	VCCSPA1HL471J	J	470p 50V Ceramic	AA
C2053	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2054	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2055	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2056	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2060	VCCCPA1HH820J	J	82p 50V Ceramic	AA

CAPACITORS (Continued)

Ref. No.	Part No.	★	Description	Code
C2061	VCCCPA1HH820J	J	82p 50V Ceramic	AA
C2062	VCCCPA1HH820J	J	82p 50V Ceramic	AA
C2063	VCCCPA1HH820J	J	82p 50V Ceramic	AA
C2064	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C2065	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C2066	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2067	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C2068	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C2069	VCTYPA1EF104Z	J	0.1 25V Ceramic	AB
C2070	VCTYPA1EF104Z	J	0.1 25V Ceramic	AB
C2071	VCTYPA1EF104Z	J	0.1 25V Ceramic	AB
C2401	VCCCPA1HH2R0C	J	2p 50V Ceramic	AA
C2402	VCQYTA1HM473J	J	0.047 50V Mylar	AA
C2403	VCCCPA1HH330J	J	33p 50V Ceramic	AA
C2404	VCQYTA1HM473J	J	0.047 50V Mylar	AA
C2405	VCQYTA1HM473J	J	0.047 50V Mylar	AA
C2406	VCQYTA1HM473J	J	0.047 50V Mylar	AA
C2407	VCKYPA1HB102K	J	1000p 50V Ceramic	AA
C2408	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C2409	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2410	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C2411	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2412	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C2413	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C2414	VCQYTA1HM104J	J	0.1 50V Mylar	AA
C2415	VCCCPA1HH270J	J	27p 50V Ceramic	AA
C2431	VCQYTA1HM104J	J	0.1 50V Mylar	AA
C2434	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2436	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C2437	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2451	VCEAGA1CW336M	J	33 16V Electrolytic	AB
C2452	VCCCPA1HH120J	J	12p 50V Ceramic	AA
C2453	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2454	VCE9AA1CW106M	J	10 16 Electrolytic (N.P)	AB
C2455	VCTYPA1EF104Z	J	0.1 25V Ceramic	AB
C2456	VCEAAA1HW105M	J	1 50V Electrolytic	AB
C2457	VCEAAA1HW106M	J	10 50V Electrolytic	AB
C2458	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2459	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2460	VCKYPA1HB102K	J	1000p 50V Ceramic	AA
C2461	VCEAAA1HW106M	J	10 50V Electrolytic	AB
C2462	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2463	VCEAAA1HW105M	J	1 50V Electrolytic	AB
C2464	VCTYPA1EF104Z	J	0.1 25V Ceramic	AB
C2465	VCE9AA1HW105M	J	1 50V Electrolytic (N.P)	AB
C2466	VCKYPA1HB102K	J	1000p 50V Ceramic	AA
C2467	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2468	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2469	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2470	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2471	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C2472	VCEAGA1CW336M	J	33 16V Electrolytic	AB

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CAPACITORS (Continued)

Ref. No.	Part No.	★	Description	Code
C2473	VCCCPA1HH180J	J	18p 50V Ceramic	AA
C2474	VCEAGA1CW336M	J	33 16V Electrolytic	AB
C2475	VCCCPA1HH150J	J	15p 50V Ceramic	AA
C2476	RTO-H0011TAZZ	J	Trimmer	AD
C2477	VCEAGA1HW106M	J	10 50V Electrolytic	AC
C2478	VCCCPA1HH150J	J	15p 50V Ceramic	AA
C2480	VCEAGA1CW336M	J	33 16V Electrolytic	AB
C2481	VCCCPA1HH3R0C	J	3p 50V Ceramic	AA
C2484	VCCCPA1HH390J	J	39p 50V Ceramic	AA
C2486	VCTYPA1EF104Z	J	0.1 25V Ceramic	AB
C2487	VCTYPA1EF104Z	J	0.1 25V Ceramic	AB
C2488	VCTYPA1EF104Z	J	0.1 25V Ceramic	AB
C2489	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C2490	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C2492	VCCCPA1HH121J	J	120p 50V Ceramic	AA
C2493	VCCCPA1HH151J	J	150p 50V Ceramic	AA
C2494	VCCCPA1HH3R0C	J	3p 50V Ceramic	AA
C2495	VCCCPA1HH560J	J	56p 50V Ceramic	AA
C2801	VCTYPA1EX104M	J	0.1 25V	AB
C2802	VCTYPA1EX104M	J	0.1 25V	AB
C2803	VCTYPA1EX104M	J	0.1 25V	AB

RESISTORS

Ref. No.	Part No.	★	Description	Code
R101	VRD-RA2EE750J	J	75 1/4W Carbon	AA
R102	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R103	VRD-RA2EE750J	J	75 1/4W Carbon	AA
R104	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R105	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R106	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R110	VRD-RA2EE750J	J	75 1/4W Carbon	AA
R111	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R112	VRD-RA2EE750J	J	75 1/4W Carbon	AA
R113	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R114	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R115	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R116	VRD-RA2EE750J	J	75 1/4W Carbon	AA
R117	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R118	VRD-RA2EE750J	J	75 1/4W Carbon	AA
R119	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R120	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R121	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R122	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R123	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R401	VRD-RA2BE393J	J	39k 1/8W Carbon	AA
R402	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R403	VRD-RA2BE331J	J	330 1/8W Carbon	AA
R404	VRD-RA2BE681J	J	680 1/8W Carbon	AA
R437	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R438	VRD-RA2BE102J	J	1k 1/8W Carbon	AA

RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R459	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R461	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R462	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R463	VRD-RA2BE471J	J	470 1/8W Carbon	AA
R464	VRD-RA2BE221J	J	220 1/8W Carbon	AA
R465	VRD-RA2BE471J	J	470 1/8W Carbon	AA
R466	VRD-RA2BE471J	J	470 1/8W Carbon	AA
R467	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
R468	VRD-RA2BE183J	J	18k 1/8W Carbon	AA
R469	VRD-RA2BE123J	J	12k 1/8W Carbon	AA
R470	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R475	VRD-RA2BE392J	J	3.9k 1/8W Carbon	AA
R476	VRD-RA2BE123J	J	12k 1/8W Carbon	AA
R477	VRD-RA2BE330J	J	33 1/8W Carbon	AA
R483	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R484	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R487	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
R490	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R491	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R492	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R493	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R606	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R607	VRN-SC2BP272F	J	2.7k 1/8W Metal Film	AA
R608	VRN-SC2BP153F	J	15k 1/8W Metal Film	AA
R611	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R612	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R613	VRN-SC2BP222F	J	2.2k 1/8W Metal Film	AA
R616	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R617	VRN-SC2BP222F	J	2.2k 1/8W Metal Film	AA
R618	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R623	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R634	VRD-RA2BE122J	J	1.2k 1/8W Carbon	AA
R635	VRD-RA2BE821J	J	820 1/8W Carbon	AA
R636	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA
R638	VRD-RA2BE821J	J	820 1/8W Carbon	AA
R640	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R641	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R643	VRD-RA2BE821J	J	820 1/8W Carbon	AA
R644	VRD-RA2BE122J	J	1.2k 1/8W Carbon	AA
R645	VRD-RA2BE470J	J	47 1/8W Carbon	AA
R646	VRD-RA2BE272J	J	2.7k 1/8W Carbon	AA
R647	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R648	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R649	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R650	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R651	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R652	VRD-RA2BE563J	J	56k 1/8W Carbon	AA
R653	VRD-RA2BE153J	J	15k 1/8W Carbon	AA
R654	VRD-RA2BE471J	J	470 1/8W Carbon	AA
R655	VRD-RA2BE471J	J	470 1/8W Carbon	AA
R657	VRD-RA2BE331J	J	330 1/8W Carbon	AA
R658	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
R659	VRD-RA2BE223J	J	22k 1/8W Carbon	AA
R660	VRD-RA2BE223J	J	22k 1/8W Carbon	AA

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RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R661	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R662	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
R663	VRD-RA2BE333J	J	33k 1/8W Carbon	AA
R664	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
R665	VRD-RA2BE152J	J	1.5k 1/8W Carbon	AA
R666	VRD-RA2BE273J	J	27k 1/8W Carbon	AA
R667	VRD-RA2BE153J	J	15k 1/8W Carbon	AA
R668	VRD-RA2BE183J	J	18k 1/8W Carbon	AA
R669	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R670	VRD-RA2BE561J	J	560 1/8W Carbon	AA
R671	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R673	VRD-RA2BE471J	J	470 1/8W Carbon	AA
R674	VRD-RA2BE821J	J	820 1/8W Carbon	AA
R676	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R677	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R802	VRD-RA2BE224J	J	220k1/8W Carbon	AA
R803	VRD-RA2BE225J	J	2.2M 1/8W Carbon	AA
R804	VRD-RA2HD151J	J	150 1/2W Carbon	AA
R805	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R806	VRD-RA2BE151J	J	150 1/8W Carbon	AA
R807	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R808	VRD-RA2BE331J	J	330 1/8W Carbon	AA
R809	VRD-RA2BE182J	J	1.8k 1/8W Carbon	AA
R810	VRD-RA2BE563J	J	56k 1/8W Carbon	AA
R811	VRD-RA2BE395J	J	3.9M 1/8W Carbon	AA
R812	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
R813	VRD-RA2BE271J	J	270 1/8W Carbon	AA
R814	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R816	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R817	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R818	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA
R819	VRD-RA2BE153J	J	15k 1/8W Carbon	AA
R821	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R823	VRD-RA2BE823J	J	82k 1/8W Carbon	AA
R824	VRD-RA2BE822J	J	8.2k 1/8W Carbon	AA
R825	VRD-RA2BE822J	J	8.2k 1/8W Carbon	AA
R826	VRD-RA2BE823J	J	82k 1/8W Carbon	AA
R828	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R829	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R830	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R831	VRD-RA2BE183J	J	18k 1/8W Carbon	AA
R832	VRD-RA2BE561J	J	560 1/8W Carbon	AA
R838	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R839	VRD-RA2BE334J	J	330k1/8W Carbon	AA
R840	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R841	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R843	VRD-RA2BE181J	J	180 1/8W Carbon	AA
R844	VRD-RA2BE391J	J	390 1/8W Carbon	AA
R845	VRD-RA2HD272J	J	2.7k 1/2W Carbon	AA
R846	VRD-RA2BE391J	J	390 1/8W Carbon	AA
R847	VRD-RA2BE391J	J	390 1/8W Carbon	AA

RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R848	VRD-RA2BE820J	J	82 1/8W Carbon	AA
R849	VRD-RA2BE223J	J	22k 1/8W Carbon	AA
R850	VRD-RA2BE473J	J	47k 1/8W Carbon	AA
R851	VRD-RA2BE272J	J	2.7k 1/8W Carbon	AA
R856	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R858	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R859	VRD-RA2BE473J	J	47k 1/8W Carbon	AA
R860	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R861	VRD-RA2BE223J	J	22k 1/8W Carbon	AA
R865	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R867	VRD-RA2BE823J	J	82k 1/8W Carbon	AA
R868	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R869	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R870	VRD-RA2BE393J	J	39k 1/8W Carbon	AA
R871	VRD-RA2BE393J	J	39k 1/8W Carbon	AA
R872	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R873	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
R874	VRD-RA2BE152J	J	1.5k 1/8W Carbon	AA
R875	VRD-RA2BE182J	J	1.8k 1/8W Carbon	AA
R876	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R877	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R878	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R879	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R880	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R881	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R882	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R883	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R884	VRD-RA2BE183J	J	18k 1/8W Carbon	AA
R885	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R886	VRD-RA2BE223J	J	22k 1/8W Carbon	AA
R887	VRD-RA2BE152J	J	1.5k 1/8W Carbon	AA
R889	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R890	VRD-RA2BE221J	J	220 1/8W Carbon	AA
R891	VRD-RA2BE221J	J	220 1/8W Carbon	AA
R892	VRD-RA2BE221J	J	220 1/8W Carbon	AA
R893	VRD-RA2BE470J	J	47 1/8W Carbon	AA
R895	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R896	VRD-RA2BE152J	J	1.5k 1/8W Carbon	AA
R897	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R898	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R899	VRD-RA2BE393J	J	39k 1/8W Carbon	AA
R1401	VRD-RA2BE470J	J	47 1/8W Carbon	AA
R1402	VRD-RA2BE563J	J	56k 1/8W Carbon	AA
R1404	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R1405	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA
R1406	VRN-SC2BP100F	J	10 1/8W Metal Film	AA
R1407	VRD-RA2BE105J	J	1M 1/8W Carbon	AA
R1408	VRD-RA2BE105J	J	1M 1/8W Carbon	AA
R1409	VRD-RA2BE105J	J	1M 1/8W Carbon	AA
R1410	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R1411	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R1412	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R1413	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA
R1415	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA

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RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R1416	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA
R1418	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA
R1420	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA
R1422	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA
R1423	VRD-RA2BE470J	J	47 1/8W Carbon	AA
R1425	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R1427	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R1428	VRD-RA2BE123J	J	12k 1/8W Carbon	AA
R1429	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R1430	VRD-RA2BE123J	J	12k 1/8W Carbon	AA
R1431	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
R1432	VRD-RA2EE102J	J	1k 1/4W Carbon	AA
R1433	VRD-RA2EE102J	J	1k 1/4W Carbon	AA
R1434	VRD-RA2EE102J	J	1k 1/4W Carbon	AA
R1436	VRD-RA2BE152J	J	1.5k 1/8W Carbon	AA
R1441	VRD-RA2BE223J	J	22k 1/8W Carbon	AA
R1443	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
R1444	VRD-RA2BE470J	J	47 1/8W Carbon	AA
R1445	VRD-RA2BE221J	J	220 1/8W Carbon	AA
R1446	VRD-RA2BE221J	J	220 1/8W Carbon	AA
R1447	VRD-RA2BE221J	J	220 1/8W Carbon	AA
R1448	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R1449	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R1450	VRD-RA2BE183J	J	18k 1/8W Carbon	AA
R1451	VRD-RA2BE333J	J	33k 1/8W Carbon	AA
R1452	VRD-RA2BE104J	J	100k1/8W Carbon	AA
R1453	VRD-RA2BE100J	J	10 1/8W Carbon	AA
R1456	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R1462	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R1463	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R1466	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R1468	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R1469	VRD-RA2BE272J	J	2.7k 1/8W Carbon	AA
R1470	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R1471	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R1476	VRD-RA2BE104J	J	100k1/8W Carbon	AA
R1477	VRD-RA2BE152J	J	1.5k 1/8W Carbon	AA
R1500	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R1501	VRD-RA2BE272J	J	2.7k 1/8W Carbon	AA
R1502	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA
R1503	VRD-RA2BE681J	J	680 1/8W Carbon	AA
R1517	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
R1518	VRD-RA2BE561J	J	560 1/8W Carbon	AA
R1519	VRD-RA2BE152J	J	1.5k 1/8W Carbon	AA
R1520	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA
R1521	VRD-RA2BE152J	J	1.5k 1/8W Carbon	AA
R1522	VRD-RA2EE102J	J	1k 1/4W Carbon	AA
R1531	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R1533	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R1535	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R1536	VRD-RA2HD122J	J	1.2k 1/2W Carbon	AA

RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R1537	VRD-RA2HD122J	J	1.2k 1/2W Carbon	AA
R1538	VRD-RA2BE470J	J	47 1/8W Carbon	AA
R1539	VRD-RA2BE470J	J	47 1/8W Carbon	AA
R1540	VRD-RA2BE2R2J	J	2.2 1/8W Carbon	AA
R1541	VRD-RA2BE2R2J	J	2.2 1/8W Carbon	AA
R1542	VRD-RA2BE5R6J	J	5.6 1/8W Carbon	AA
R1543	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R1544	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R1545	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R1546	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R1547	VRD-RA2HD122J	J	1.2k 1/2W Carbon	AA
R1548	VRD-RA2HD122J	J	1.2k 1/2W Carbon	AA
R1549	VRD-RA2BE470J	J	47 1/8W Carbon	AA
R1550	VRD-RA2BE470J	J	47 1/8W Carbon	AA
R1551	VRD-RA2BE2R2J	J	2.2 1/8W Carbon	AA
R1552	VRD-RA2BE2R2J	J	2.2 1/8W Carbon	AA
R1553	VRD-RA2BE5R6J	J	5.6 1/8W Carbon	AA
R1554	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R1555	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R1556	VRD-RA2HD122J	J	1.2k 1/2W Carbon	AA
R1557	VRD-RA2HD122J	J	1.2k 1/2W Carbon	AA
R1558	VRD-RA2BE470J	J	47 1/8W Carbon	AA
R1559	VRD-RA2BE470J	J	47 1/8W Carbon	AA
R1560	VRD-RA2BE2R2J	J	2.2 1/8W Carbon	AA
R1561	VRD-RA2BE2R2J	J	2.2 1/8W Carbon	AA
R1562	VRD-RA2BE5R6J	J	5.6 1/8W Carbon	AA
R1564	VRD-RA2BE681J	J	680 1/8W Carbon	AA
R1569	VRD-RA2BE105J	J	1M 1/8W Carbon	AA
R1570	VRD-RA2BE104J	J	100k1/8W Carbon	AA
R1571	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
R1601	VRD-RA2BE393J	J	39k 1/8W Carbon	AA
R1602	VRD-RA2BE822J	J	8.2k 1/8W Carbon	AA
R1604	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
R1605	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R1606	VRD-RA2BE184J	J	180k1/8W Carbon	AA
R1607	VRD-RA2BE393J	J	39k 1/8W Carbon	AA
R1608	VRD-RA2BE564J	J	560k 1/8W Carbon	AA
R1609	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R1610	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R1611	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R1612	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R1613	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA
R1614	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R1615	VRD-RA2BE183J	J	18k 1/8W Carbon	AA
R1616	VRD-RA2BE393J	J	39k 1/8W Carbon	AA
R1617	VRD-RA2BE123J	J	12k 1/8W Carbon	AA
R1618	VRD-RA2BE333J	J	33k 1/8W Carbon	AA
R1619	VRD-RA2BE474J	J	470k 1/8W Carbon	AA
R1620	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R1803	VRD-RA2BE272J	J	2.7k 1/8W Carbon	AA
R1804	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA
R1805	VRD-RA2BE104J	J	100k1/8W Carbon	AA
R1806	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2001	VRD-RA2BE101J	J	100 1/8W Carbon	AA

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RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R2002	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R2003	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R2004	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R2005	VRD-RA2BE223J	J	22k 1/8W Carbon	AA
R2006	VRD-RA2BE183J	J	18k 1/8W Carbon	AA
R2010	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R2011	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R2012	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R2013	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R2014	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R2015	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R2016	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R2017	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R2018	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R2019	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R2020	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R2021	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R2022	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R2023	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2024	VRD-RA2BE392J	J	3.9k 1/8W Carbon	AA
R2027	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA
R2028	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2029	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R2030	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2031	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R2032	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2033	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2034	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2039	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA
R2040	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R2041	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R2046	VRD-RA2BE273J	J	27k 1/8W Carbon	AA
R2047	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2048	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2049	VRD-RA2BE273J	J	27k 1/8W Carbon	AA
R2050	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2051	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2052	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2058	VRD-RA2BE681J	J	680 1/8W Carbon	AA
R2059	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R2060	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R2064	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2065	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2066	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2068	VRD-RA2EE681J	J	680 1/4W Carbon	AA
R2069	VRD-RA2HD221J	J	220 1/2W Carbon	AA
R2075	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R2080	VRD-RA2BE821J	J	820 1/8W Carbon	AA
R2081	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2085	VRD-RA2BE271J	J	270 1/8W Carbon	AA
R2087	VRD-RA2BE681J	J	680 1/8W Carbon	AA

RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R2088	VRD-RA2BE681J	J	680 1/8W Carbon	AA
R2094	VRD-RA2BE473J	J	47k 1/8W Carbon	AA
R2096	VRN-SC2BP101F	J	100 1/8W Metal Film	AA
R2097	VRD-RA2BE824J	J	820k 1/8W Carbon	AA
R2098	VRN-SC2BP332F	J	3.3k 1/8W Metal Film	AA
R2099	VRD-RA2BE153J	J	15k 1/8W Carbon	AA
R2100	VRD-RA2BE123J	J	12k 1/8W Carbon	AA
R2102	VRD-RA2BE153J	J	15k 1/8W Carbon	AA
R2103	VRD-RA2BE153J	J	15k 1/8W Carbon	AA
R2104	VRD-RA2BE823J	J	82k 1/8W Carbon	AA
R2105	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2106	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R2107	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2108	VRD-RA2BE123J	J	12k 1/8W Carbon	AA
R2109	VRD-RA2BE153J	J	15k 1/8W Carbon	AA
R2113	VRD-RA2BE1R0J	J	1 1/8W Carbon	AA
R2114	VRD-RA2BE183J	J	18k 1/8W Carbon	AA
R2115	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2116	VRD-RA2BE104J	J	100k1/8W Carbon	AA
R2117	VRD-RA2BE104J	J	100k1/8W Carbon	AA
R2118	VRD-RA2BE224J	J	220k1/8W Carbon	AA
R2119	VRD-RA2BE224J	J	220k1/8W Carbon	AA
R2120	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2121	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2122	VRD-RA2BE153J	J	15k 1/8W Carbon	AA
R2123	VRD-RA2BE104J	J	100k1/8W Carbon	AA
R2124	VRD-RA2BE823J	J	82k 1/8W Carbon	AA
R2125	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2126	VRD-RA2BE224J	J	220k1/8W Carbon	AA
R2127	VRD-RA2BE104J	J	100k1/8W Carbon	AA
R2129	VRD-RA2BE822J	J	8.2k 1/8W Carbon	AA
R2130	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2131	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2134	VRD-RA2BE152J	J	1.5k 1/8W Carbon	AA
R2135	VRD-RA2BE124J	J	120k 1/8W Carbon	AA
R2136	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
R2138	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2139	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
R2141	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2142	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
R2144	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2145	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
R2147	VRD-RA2BE331J	J	330 1/8W Carbon	AA
R2148	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2151	VRD-RA2BE223J	J	22k 1/8W Carbon	AA
R2152	VRD-RA2BE5R6J	J	5.6 1/8W Carbon	AA
R2153	VRD-RA2BE5R6J	J	5.6 1/8W Carbon	AA
R2154	VRD-RA2BE5R6J	J	5.6 1/8W Carbon	AA
R2155	VRD-RA2BE5R6J	J	5.6 1/8W Carbon	AA
R2164	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2165	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2166	VRD-RA2BE473J	J	47k 1/8W Carbon	AA
R2167	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R2168	VRD-RA2BE473J	J	47k 1/8W Carbon	AA

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MAIN UNIT (Continued)

RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R2169	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R2170	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R2171	VRD-RA2BE151J	J	150 1/8W Carbon	AA
R2172	VRD-RA2BE181J	J	180 1/8W Carbon	AA
R2174	VRD-RA2BE223J	J	22k 1/8W Carbon	AA
R2175	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2176	VRD-RA2BE223J	J	22k 1/8W Carbon	AA
R2177	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R2179	VRD-RA2BE123J	J	12k 1/8W Carbon	AA
R2180	VRD-RA2BE154J	J	150k 1/8W Carbon	AA
R2181	VRD-RA2BE223J	J	22k 1/8W Carbon	AA
R2182	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2183	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R2184	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R2185	VRD-RA2BE104J	J	100k1/8W Carbon	AA
R2187	VRD-RA2BE124J	J	120k 1/8W Carbon	AA
R2188	VRD-RA2HD1R8J	J	1.8 1/2W Carbon	AA
R2192	VRD-RA2BE471J	J	470 1/8W Carbon	AA
R2193	VRD-RA2BE273J	J	27k 1/8W Carbon	AA
R2401	VRD-RA2BE272J	J	2.7k 1/8W Carbon	AA
R2402	VRD-RA2BE821J	J	820 1/8W Carbon	AA
R2403	VRD-RA2BE393J	J	39k 1/8W Carbon	AA
R2404	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA
R2405	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2406	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R2407	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R2408	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R2409	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2410	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2411	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2412	VRD-RA2BE223J	J	22k 1/8W Carbon	AA
R2413	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2414	VRD-RA2BE561J	J	560 1/8W Carbon	AA
R2415	VRD-RA2BE561J	J	560 1/8W Carbon	AA
R2416	VRD-RA2BE121J	J	120 1/8W Carbon	AA
R2418	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2421	VRD-RA2BE823J	J	82k 1/8W Carbon	AA
R2436	VRD-RA2BE333J	J	33k 1/8W Carbon	AA
R2437	VRD-RA2BE333J	J	33k 1/8W Carbon	AA
R2438	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2451	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2452	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2453	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
R2454	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2455	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2456	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
R2457	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2459	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2460	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2462	VRD-RA2BE105J	J	1M 1/8W Carbon	AA
R2463	VRD-RA2BE102J	J	1k 1/8W Carbon	AA

RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R2464	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2465	VRD-RA2BE683J	J	68k 1/8W Carbon	AA
R2466	VRD-RA2BE273J	J	27k 1/8W Carbon	AA
R2467	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
R2468	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2469	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
R2471	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2473	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2474	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
R2475	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
R2476	VRD-RA2BE105J	J	1M 1/8W Carbon	AA
R2477	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2478	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2479	VRD-RA2BE683J	J	68k 1/8W Carbon	AA
R2480	VRD-RA2BE273J	J	27k 1/8W Carbon	AA
R2481	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
R2482	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2483	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
R2484	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2485	VRD-RA2BE391J	J	390 1/8W Carbon	AA
R2486	VRD-RA2BE561J	J	560 1/8W Carbon	AA
R2487	VRD-RA2BE182J	J	1.8k 1/8W Carbon	AA
R2489	VRD-RA2BE182J	J	1.8k 1/8W Carbon	AA
R2490	VRD-RA2BE823J	J	82k 1/8W Carbon	AA
R2491	VRD-RA2BE153J	J	15k 1/8W Carbon	AA
R2492	VRD-RA2BE151J	J	150 1/8W Carbon	AA
R2494	VRD-RA2BE271J	J	270 1/8W Carbon	AA
R2495	VRD-RA2BE221J	J	220 1/8W Carbon	AA
R2496	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2497	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2498	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2500	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
R2501	VRD-RA2BE823J	J	82k 1/8W Carbon	AA
R2502	VRD-RA2BE153J	J	15k 1/8W Carbon	AA
R2503	VRD-RA2BE821J	J	820 1/8W Carbon	AA
R2504	VRD-RA2BE221J	J	220 1/8W Carbon	AA
R2505	VRD-RA2BE821J	J	820 1/8W Carbon	AA
R2506	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2507	VRD-RA2BE152J	J	1.5k 1/8W Carbon	AA
R2508	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
R2509	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2512	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
R2513	VRD-RA2BE273J	J	27k 1/8W Carbon	AA
R2514	VRD-RA2BE392J	J	3.9k 1/8W Carbon	AA
R2517	VRD-RA2BE471J	J	470 1/8W Carbon	AA
R2519	VRD-RA2BE392J	J	3.9k 1/8W Carbon	AA
R2523	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
R2524	VRD-RA2BE823J	J	82k 1/8W Carbon	AA
R2525	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2526	VRD-RA2BE392J	J	3.9k 1/8W Carbon	AA
R2527	VRD-RA2BE151J	J	150 1/8W Carbon	AA
R2528	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2529	VRD-RA2BE331J	J	330 1/8W Carbon	AA
R2530	VRD-RA2BE473J	J	47k 1/8W Carbon	AA

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MAIN UNIT (Continued)

RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R2531	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2536	VRN-SC2BP100F	J	10 1/8W Metal Film	AA
R2538	VRD-RA2EE100J	J	10 1/4W Carbon	AA
R2540	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
R2801	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R2802	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA
R2803	VRD-RA2BE561J	J	560 1/8W Carbon	AA
R2804	VRD-RA2BE151J	J	150 1/8W Carbon	AA
R2805	VRD-RA2BE152J	J	1.5k 1/8W Carbon	AA
R2806	VRD-RA2BE392J	J	3.9k 1/8W Carbon	AA
R2807	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R2808	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA
R2809	VRD-RA2BE561J	J	560 1/8W Carbon	AA
R2810	VRD-RA2BE151J	J	150 1/8W Carbon	AA
R2811	VRD-RA2BE152J	J	1.5k 1/8W Carbon	AA
R2812	VRD-RA2BE392J	J	3.9k 1/8W Carbon	AA
R2813	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R2814	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA
R2815	VRD-RA2BE561J	J	560 1/8W Carbon	AA
R2816	VRD-RA2BE151J	J	150 1/8W Carbon	AA
R2817	VRD-RA2BE152J	J	1.5k 1/8W Carbon	AA
R2818	VRD-RA2BE392J	J	3.9k 1/8W Carbon	AA
R2819	VRD-RA2BE392J	J	3.9k 1/8W Carbon	AA
R2821	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA

SWITCHES

Ref. No.	Part No.	★	Description	Code
S2001	QSW-P0560CEZZ	J	Blue Screen (B.B)	AE
S2002	QSW-P0560CEZZ	J	Reverse	AE
S2006	QSW-K0051GEZZ	J	E²P ROM Initial	AB
S2008	QSW-K0076CEZZ	J	Focus Pattern	AB
S2009	QSW-K0076CEZZ	J	Video In Select	AB
S2010	QSW-K0076CEZZ	J	Power	AB
S2011	QSW-K0076CEZZ	J	Video Adjust Select	AB
S2012	QSW-K0076CEZZ	J	DAC Up	AB
S2013	QSW-K0076CEZZ	J	DAC Down	AB
S2014	QSW-K0076CEZZ	J	Status Select	AB
S2015	QSW-K0076CEZZ	J	Reset	AB
S2023	QSW-P0564CEZZ	J	Aging Switch	AE

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
FB401	RBLN-0030CEZZ	J	Ferrite Bead	AC
J401	QSOCD0425CEZZ	J	Socket, S-Video (1)	AE
J402	QJAKE0104CEZZ	J	Jack, Video 1	AK
J403	QSOCD0425CEZZ	J	Socket, S-Video (2)	AE
J404	QJAKE0104CEZZ	J	Jack, Video 2	AK
J405	QJAKE0008TAZZ	J	Jack	AE
	PRDAR1385CEFW	J	Heat Sink	AC
	QPLGN0215CEZZ	J	Plug 2-pin	AB
	QPLGN0278GEZZ	J	Plug 2-pin	AA
	QPLGN0378GEZZ	J	Plug 3-pin	AB
	QPLGN0478GEZZ	J	Plug 4-pin	AB
	QPLGN0578GEZZ	J	Plug 5-pin	AB
	QPLGN0678GEZZ	J	Plug 6-pin	AB
	QPLGN0778GEZZ	J	Plug 7-pin	AC
	QPLGN0878GEZZ	J	Plug 8-pin	AC
	QPLGN0978GEZZ	J	Plug 9-pin	AC
	QSOCN0257GEZZ	J	Socket 2-pin	AA
	QSOCN0357GEZZ	J	Socket 3-pin	AA
	QSOCN0457GEZZ	J	Socket 4-pin	AA
	QSOCN0657GEZZ	J	Socket 6-pin	AA
	QSOCN0757GEZZ	J	Socket 7-pin	AA
	QSOCN0857GEZZ	J	Socket 8-pin	AA
	QSOCN0957GEZZ	J	Socket 9-pin	AA
	QSOCN1057GEZZ	J	Socket 10-pin	AA

—— **End of MAIN UNIT** ——

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SUB UNIT

INTEGRATED CIRCUITS

Ref. No.	Part No.	★	Description	Code
IC1001	RH-iX1781CEZZ	J	LZ93B87	AN
IC1002	VHiNJM4560M-1	J	NJM4560M	AG
IC1004	VHiTC4050AF-1	J	TC74HC4050AF	AD
IC1005	RH-iX1641CEZZ	J	CLC400AJE	AX
IC1006	RH-iX1641CEZZ	J	CLC400AJE	AX
IC1007	RH-iX1641CEZZ	J	CLC400AJE	AX
IC1403	VHiNJM318D/-1	J	NJM318D	AL
IC1404	VHiLM6321//-1	J	LM6321N	AQ
IC1405	VHiLM6321//-1	J	LM6321N	AQ
IC1406	VHiLM6321//-1	J	LM6321N	AQ

TRANSISTOR

Ref. No.	Part No.	★	Description	Code
Q1001	VS2SC2735//1E	J	2SC2735	AC

DIODES

Ref. No.	Part No.	★	Description	Code
D1001	VHDMA335///1E	J	Diode	AD
D1002	VHD1SS119//-1	J	1SS119	AB
D1003	RH-EX0153CEZZ	J	Zener Diode	AB

COILS

Ref. No.	Part No.	★	Description	Code
L1001	RCiLB0028CEZZ	J	H-Hold	AE
L1002	VP-MK220K0000	J	22μH	AB
L1004	VP-MK220K0000	J	22μH	AB
L1404	VP-MK220K0000	J	22μH	AB
L1406	VP-MK220K0000	J	22μH	AB
L1408	VP-MK220K0000	J	22μH	AB

CONTROLS

Ref. No.	Part No.	★	Description	Code
R1001	RVR-M4480GEZZ	J	10k(B) Phase	AC
R1014	RVR-M4477GEZZ	J	3.3k(B) Phase Level	AC
R1069	RVR-M7399TAZZ	J	3.3k(B) Clk Bias	AC
R1070	RVR-M7399TAZZ	J	3.3k(B) Clk Bias	AC
R1071	RVR-M7399TAZZ	J	3.3k(B) Clk Bias	AC
R1483	RVR-M4478GEZZ	J	4.7k(B) Red Com-Amp.	AC
R1486	RVR-M4482GEZZ	J	22k(B) Red Com-Bias	AC
R1489	RVR-M4478GEZZ	J	4.7k(B) Blue Com-Amp.	AC
R1492	RVR-M4482GEZZ	J	22k(B) Blue Com-Bias	AC
R1495	RVR-M4478GEZZ	J	4.7k(B) Green Com-Amp.	AC
R1498	RVR-M4482GEZZ	J	22k(B) Green Com-Bias	AC

CAPACITORS

Ref. No.	Part No.	★	Description	Code
C621	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C622	VCEAGA1EW107M	J	100 25V Electrolytic	AD
C1001	VCCCTV1HH391J	J	390p 50V Ceramic	AA
C1002	VCEAPF1EW475M	J	4.7 25V Electrolytic	AB
C1003	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1004	VCKYTV1HB102K	J	1000p 50V Ceramic	AA
C1005	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1006	VCKYTV1HB102K	J	1000p 50V Ceramic	AA
C1007	VCCCTV1HH151J	J	150p 50V Ceramic	AA
C1008	VCCCTV1HH221J	J	220p 50V Ceramic	AA
C1009	VCCCTV1HH561J	J	560p 50V Ceramic	AA
C1010	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1011	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1012	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1013	VCKYTV1HB103K	J	0.01 50V Ceramic	AA
C1014	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1015	VCEAPF1CW476M	J	47 16V Electrolytic	AC
C1016	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1017	VCKYTV1HB472K	J	4700p 50V Ceramic	AA
C1018	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1019	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1020	VCKYTV1HB472K	J	4700p 50V Ceramic	AA
C1021	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1022	VCKYTV1HB472K	J	4700p 50V Ceramic	AA
C1023	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1024	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1025	VCEAPF1AW476M	J	47 10V Electrolytic	AB
C1026	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1027	VCKYTV1HB103K	J	0.01 50V Ceramic	AA
C1028	VCKYTV1HB103K	J	0.01 50V Ceramic	AA
C1029	VCEAPF1CW476M	J	47 16V Electrolytic	AC
C1030	VCEAPF1CW106M	J	10 16V Electrolytic	AB
C1031	VCEAPF1CW476M	J	47 16V Electrolytic	AC
C1032	VCEAPF1AW476M	J	47 10V Electrolytic	AB
C1033	VCEAPF1CW476M	J	47 16V Electrolytic	AC
C1041	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1042	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1043	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1044	VCCCTV1HH101J	J	100p 50V Ceramic	AA
C1440	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1441	VCEAGA1EW107M	J	100 25V Electrolytic	AD
C1442	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1443	VCEAGA1EW107M	J	100 25V Electrolytic	AD
C1444	VCEAGA1CW226M	J	22 16V Electrolytic	AB
C1445	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1446	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1447	VCEAGA1HW105M	J	1 50V Electrolytic	AC
C1448	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1449	VCEAGA1HW105M	J	1 50V Electrolytic	AC
C1450	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1451	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1452	VCEAGA1HW105M	J	1 50V Electrolytic	AC
C1453	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1462	VCEAGA1HW104M	J	0.1 50V Electrolytic	AA

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SUB UNIT (Continued)

CAPACITORS

Ref. No.	Part No.	★	Description	Code
C1463	VCEAGA1AW227M	J	220 10V Electrolytic	AB
C1464	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C1465	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C1466	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C1467	VCEAGA1HW104M	J	0.1 50V Electrolytic	AA
C1468	VCEAGA1HW104M	J	0.1 50V Electrolytic	AA
C1469	VCEAGA1AW227M	J	220 10V Electrolytic	AB
C1470	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C1471	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C1472	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C1473	VCEAGA1HW104M	J	0.1 50V Electrolytic	AA
C1474	VCEAGA1HW104M	J	0.1 50V Electrolytic	AA
C1475	VCEAGA1AW227M	J	220 10V Electrolytic	AB
C1476	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C1477	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C1478	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C1493	VCCCTV1HH3R0C	J	3p 50V Ceramic	AA
C1495	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1496	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1497	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C1498	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C1499	VCEAGA1EW107M	J	100 25V Electrolytic	AD
C1500	VCKYD41CY103N	J	0.01 16V Ceramic	AA
C1501	VCKYAT1EX103N	J	0.01 25V Ceramic	AA

RESISTORS

Ref. No.	Part No.	★	Description	Code
R1002	VRS-TV1JD561J	J	560 1/16W Metal Oxide	AA
R1003	VRS-TV1JD561J	J	560 1/16W Metal Oxide	AA
R1004	VRS-TV1JD561J	J	560 1/16W Metal Oxide	AA
R1006	VRS-TV1JD561J	J	560 1/16W Metal Oxide	AA
R1007	VRS-TV1JD561J	J	560 1/16W Metal Oxide	AA
R1008	VRS-TV1JD561J	J	560 1/16W Metal Oxide	AA
R1009	VRS-TV1JD105J	J	1M 1/16W Metal Oxide	AA
R1010	VRS-TV1JD561J	J	560 1/16W Metal Oxide	AA
R1011	VRS-TV1JD561J	J	560 1/16W Metal Oxide	AA
R1012	VRS-TV1JD561J	J	560 1/16W Metal Oxide	AA
R1013	VRS-TV1JD512J	J	5.1k 1/16W Metal Oxide	AA
R1015	VRS-TV1JD182J	J	1.8k 1/16W Metal Oxide	AA
R1016	VRS-TV1JD822J	J	8.2k 1/16W Metal Oxide	AA
R1017	VRS-TV1JD683J	J	68k 1/16W Metal Oxide	AA
R1018	VRS-TV1JD103J	J	10k 1/16W Metal Oxide	AA
R1019	VRS-TV1JD472J	J	4.7k 1/16W Metal Oxide	AA
R1020	VRS-TV1JD472J	J	4.7k 1/16W Metal Oxide	AA
R1021	VRS-TV1JD101J	J	100 1/16W Metal Oxide	AA
R1022	VRS-TV1JD101J	J	100 1/16W Metal Oxide	AA
R1023	VRS-TV1JD101J	J	100 1/16W Metal Oxide	AA
R1024	VRS-TV1JD102J	J	1k 1/16W Metal Oxide	AA
R1026	VRS-TV1JD103J	J	10k 1/16W Metal Oxide	AA
R1027	VRS-TV1JD103J	J	10k 1/16W Metal Oxide	AA

RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R1028	VRS-TV1JD103J	J	10k 1/16W Metal Oxide	AA
R1029	VRD-RA2HD221J	J	220 1/2W Carbon	AA
R1030	VRS-TV1JD183J	J	18k 1/16W Metal Oxide	AA
R1033	VRS-TV1JD331J	J	330 1/16W Metal Oxide	AA
R1034	VRS-TV1JD562J	J	5.6k 1/16W Metal Oxide	AA
R1035	VRS-TV1JD470J	J	47 1/16W Metal Oxide	AA
R1036	VRS-TV1JD241J	J	240 1/16W Metal Oxide	AA
R1037	VRS-TV1JD561J	J	560 1/16W Metal Oxide	AA
R1038	VRS-TV1JD183J	J	18k 1/16W Metal Oxide	AA
R1041	VRS-TV1JD562J	J	5.6k 1/16W Metal Oxide	AA
R1042	VRS-TV1JD561J	J	560 1/16W Metal Oxide	AA
R1044	VRS-TV1JD331J	J	330 1/16W Metal Oxide	AA
R1045	VRS-TV1JD183J	J	18k 1/16W Metal Oxide	AA
R1048	VRS-TV1JD562J	J	5.6k 1/16W Metal Oxide	AA
R1049	VRS-TV1JD470J	J	47 1/16W Metal Oxide	AA
R1051	VRS-TV1JD561J	J	560 1/16W Metal Oxide	AA
R1052	VRS-TV1JD331J	J	330 1/16W Metal Oxide	AA
R1056	VRS-TV1JD470J	J	47 1/16W Metal Oxide	AA
R1057	VRS-TV1JD561J	J	560 1/16W Metal Oxide	AA
R1058	VRS-TV1JD561J	J	560 1/16W Metal Oxide	AA
R1059	VRS-TV1JD561J	J	560 1/16W Metal Oxide	AA
R1060	VRS-TV1JD561J	J	560 1/16W Metal Oxide	AA
R1061	VRS-TV1JD561J	J	560 1/16W Metal Oxide	AA
R1062	VRS-TV1JD561J	J	560 1/16W Metal Oxide	AA
R1063	VRS-TV1JD561J	J	560 1/16W Metal Oxide	AA
R1064	VRS-TV1JD561J	J	560 1/16W Metal Oxide	AA
R1065	VRS-TV1JD561J	J	560 1/16W Metal Oxide	AA
R1066	VRS-TV1JD561J	J	560 1/16W Metal Oxide	AA
R1005	VRS-TV1JD332J	J	3.3k 1/16W Metal Oxide	AA
R1032	VRS-TV1JD332J	J	3.3k 1/16W Metal Oxide	AA
R1040	VRS-TV1JD332J	J	3.3k 1/16W Metal Oxide	AA
R1043	VRS-TV1JD241J	J	240 1/16W Metal Oxide	AA
R1047	VRS-TV1JD332J	J	3.3k 1/16W Metal Oxide	AA
R1050	VRS-TV1JD241J	J	240 1/16W Metal Oxide	AA
R1053	VRS-TV1JD273J	J	27k 1/16W Metal Oxide	AA
R1054	VRS-TV1JD154J	J	150k 1/16W Metal Oxide	AA
R1055	VRS-TV1JD154J	J	150k 1/16W Metal Oxide	AA
R1067	VRS-TV1JD392J	J	3.9k 1/16W Metal Oxide	AA
R1068	VRD-RA2HD181J	J	180 1/2W Carbon	AA
R1072	VRD-RA2HD8R2J	J	8.2 1/2W Carbon	AA
R1478	VRS-TV1JD223J	J	22k 1/16W Metal Oxide	AA
R1479	VRS-TV1JD472J	J	4.7k 1/16W Metal Oxide	AA
R1480	VRS-TV1JD472J	J	4.7k 1/16W Metal Oxide	AA
R1481	VRS-TV1JD472J	J	4.7k 1/16W Metal Oxide	AA
R1482	VRS-TV1JD102J	J	1k 1/16W Metal Oxide	AA
R1484	VRS-TV1JD102J	J	1k 1/16W Metal Oxide	AA
R1485	VRS-TV1JD563J	J	56k 1/16W Metal Oxide	AA
R1487	VRS-TV1JD183J	J	18k 1/16W Metal Oxide	AA
R1488	VRS-TV1JD102J	J	1k 1/16W Metal Oxide	AA
R1491	VRS-TV1JD563J	J	56k 1/16W Metal Oxide	AA
R1490	VRS-TV1JD102J	J	1k 1/16W Metal Oxide	AA
R1493	VRS-TV1JD183J	J	18k 1/16W Metal Oxide	AA
R1494	VRS-TV1JD102J	J	1k 1/16W Metal Oxide	AA
R1496	VRS-TV1JD102J	J	1k 1/16W Metal Oxide	AA

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SUB UNIT (Continued)

RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R1497	VRS-TV1JD563J	J	56k 1/16W Metal Oxide	AA
R1499	VRS-TV1JD183J	J	18k 1/16W Metal Oxide	AA
R1506	VRS-TV1JD560J	J	56 1/16W Metal Oxide	AA
R1507	VRS-TV1JD6R8J	J	6.8 1/16W Metal Oxide	AA
R1508	VRS-TV1JD560J	J	56 1/16W Metal Oxide	AA
R1509	VRS-TV1JD560J	J	56 1/16W Metal Oxide	AA
R1510	VRS-TV1JD6R8J	J	6.8 1/16W Metal Oxide	AA
R1511	VRS-TV1JD560J	J	56 1/16W Metal Oxide	AA
R1512	VRS-TV1JD560J	J	56 1/16W Metal Oxide	AA
R1513	VRS-TV1JD6R8J	J	6.8 1/16W Metal Oxide	AA
R1514	VRS-TV1JD560J	J	56 1/16W Metal Oxide	AA

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
	QPLGN0378GEZZ	J	Plug 3-pin	AB
	QPLGN0678GEZZ	J	Plug 6-pin	AB
	QPLGN0778GEZZ	J	Plug 7-pin	AC
	QPLGN0878GEZZ	J	Plug 8-pin	AC
	QSOCN1618CEZZ	J	Socket 16-pin	AE

—— End of SUB UNIT ——

DUNTK6903DE03
DIGITAL UNIT

INTEGRATED CIRCUITS

Ref. No.	Part No.	★	Description	Code
IC6001	VHiMB40578P-1	J	MB40578P	BD
IC6002	VHiMB40578P-1	J	MB40578P	BD
IC6003	VHiMB40578P-1	J	MB40578P	BD
IC6004	VHiCXK1201P-1	J	CXK1201P	BA
IC6005	VHiCXK1201P-1	J	CXK1201P	BA
IC6006	VHiCXK1201P-1	J	CXK1201P	BA
IC6007	VHiCX20206/-1	J	CX20206	BC
IC6008	VHiiR9431//-1	J	iR9431	AE
IC6009	VHiSN7404//-1	J	SN7404N	AE
IC6010	VHiSNHC00NS-1	J	SN74HC00NS	AC
IC6011	VHiSNHC00NS-1	J	SN74HC00NS	AC
IC6012	VHiTC4538AF-1	J	TC74HC4538AF	AH
IC6013	VHiTC4538AF-1	J	TC74HC4538AF	AH
IC6014	VHiSN574NS/-1	J	SN74HC574NS	AL
IC6015	VHiSNHC21NS-1	J	SN74HC21NS	AE
IC6016	VHiTC7SU04F-1	J	I.C.	AC
IC6017	VHiSN393NS/-1	J	SN74HC393NS	AG

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q6001	VS2SC2712Y/-1	J	2SC2712 (Y)	AB
Q6002	VS2SC2712Y/-1	J	2SC2712 (Y)	AB
Q6003	VS2SC2712Y/-1	J	2SC2712 (Y)	AB
Q6004	VS2SC2712Y/-1	J	2SC2712 (Y)	AB
Q6005	VS2SA1162Y/-1	J	2SA1162 (Y)	AB
Q6006	VS2SC2712Y/-1	J	2SC2712 (Y)	AB
Q6007	VS2SC2712Y/-1	J	2SC2712 (Y)	AB
Q6008	VS2SA1162Y/-1	J	2SA1162 (Y)	AB
Q6009	VS2SC2712Y/-1	J	2SC2712 (Y)	AB
Q6010	VS2SC2712Y/-1	J	2SC2712 (Y)	AB
Q6011	VS2SA1162Y/-1	J	2SA1162 (Y)	AB
Q6012	VS2SC2712Y/-1	J	2SC2712 (Y)	AB
Q6013	VS2SC2712Y/-1	J	2SC2712 (Y)	AB
Q6015	VS2SC2712Y/-1	J	2SC2712 (Y)	AB
Q6016	VS2SC2735//1E	J	2SC2735	AC
Q6017	VS2SC2712Y/-1	J	2SC2712 (Y)	AB

DIODES

Ref. No.	Part No.	★	Description	Code
D6001	VHDMA335///1E	J	MA335	AD
D6002	VHDMA152WK/-1	J	MA152WK	AA
D6003	VHDMA152WK/-1	J	MA152WK	AA
D6004	VHDMA152WK/-1	J	MA152WK	AA

PACKAGED CIRCUITS

Ref. No.	Part No.	★	Description	Code
FL6002	RMPTD0011CEZZ	J	Low Pass Filter	AE
FL6003	RMPTD0011CEZZ	J	Low Pass Filter	AE
FL6004	RMPTD0011CEZZ	J	Low Pass Filter	AE

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DIGITAL UNIT (Continued)

COILS AND TRANSFORMAER

Ref. No.	Part No.	★	Description	Code
L6001	RCiLF0122CEZZ	J	Coil, 100μH	AC
L6002	RCiLF0122CEZZ	J	Coil, 100μH	AC
L6003	RCiLF0122CEZZ	J	Coil, 100μH	AC
L6005	RCiLF0122CEZZ	J	Coil, 100μH	AC
L6007	RCiLF0122CEZZ	J	Coil, 100μH	AC
L6008	RCiLF0122CEZZ	J	Coil, 100μH	AC
T6001	RCiLB0029CEZZ	J	Coil	AD

CONTROL

Ref. No.	Part No.	★	Description	Code
R6020	RVR-M4480GEZZ	J	10k (B) Regulator Voltage	AC

CAPACITORS

Ref. No.	Part No.	★	Description	Code
C6001	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C6002	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C6003	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C6004	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C6005	VCSATA1VE475K	J	4.7 35k Tantalum	AD
C6006	VCSATA1VE475K	J	4.7 35k Tantalum	AD
C6007	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C6008	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C6009	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C6010	VCSATA1VE475K	J	4.7 35k Tantalum	AD
C6011	VCEAGA1CW226M	J	22 16V Electrolytic	AB
C6012	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C6013	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C6014	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C6015	VCSATA1VE475K	J	4.7 35k Tantalum	AD
C6016	VCEAGA1CW226M	J	22 16V Electrolytic	AB
C6017	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C6018	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C6019	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C6020	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C6021	RC-EZ0338CEZZ	J	330 16V Electrolytic	AC
C6022	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C6023	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C6024	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C6025	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C6026	VCEAGA1AW477M	J	470 10V Electrolytic	AC
C6027	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C6028	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C6029	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C6030	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C6031	VCEAGA1CW227M	J	220 16V Electrolytic	AC
C6032	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C6033	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C6034	VCEAGA1CW476M	J	47 16V Electrolytic	AB

CAPACITORS (Continued)

Ref. No.	Part No.	★	Description	Code
C6035	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C6036	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C6037	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C6038	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C6039	VCEAGA1AW476M	J	47 10V Electrolytic	AA
C6040	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C6041	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C6042	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C6043	VCQYVA1HA102J	J	1000p 50V Mylar	AA
C6044	VCCCPA1HH221J	J	220p 50V Ceramic	AB
C6045	VCQYVA1HA102J	J	1000p 50V Mylar	AA
C6046	VCEAGA1AW477M	J	470 10V Electrolytic	AC
C6047	VCEAGA1AW476M	J	47 10V Electrolytic	AA
C6048	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C6049	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C6050	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C6051	VCEAGA1AW477M	J	470 10V Electrolytic	AC
C6055	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C6056	VCKYTV1HB102K	J	1000p 50V Ceramic	AA
C6059	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C6060	VCCUTV1HJ151J	J	150p 50V Ceramic	AA
C6062	VCCUTV1HJ561J	J	560p 50V Ceramic	AA
C6063	VCEAGA0JW107M	J	100 6.3V Electrolytic	AB
C6064	VCCCTV1HH330J	J	33p 50V Ceramic	AA
C6065	VCKYTV1HB102K	J	1000p 50V Ceramic	AA
C6066	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C6067	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C6068	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C6070	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C6071	RC-KZ0105CEZZ	J	0.1 50V Ceramic	AA
C6072	VCQYTA1HM103J	J	0.01 50V Mylar	AA
C6073	VCQYTA1HM103J	J	0.01 50V Mylar	AA
C6074	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C6075	VCQYTA1HM103J	J	0.01 50V Mylar	AA
C6076	VCQYTA1HM103J	J	0.01 50V Mylar	AA
C6077	VCEAGA1AW107M	J	100 10V Electrolytic	AB
C6078	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C6079	VCQYTA1HM103J	J	0.01 50V Mylar	AA
C6080	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C6081	VCQYTA1HM103J	J	0.01 50V Mylar	AA
C6085	VCTYPA1EF104Z	J	0.1 25V Ceramic	AB
C6086	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C6087	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C6088	VCKYTV1EF104Z	J	0.1 25V Ceramic	AB
C6089	VCCCTV1HH100D	J	10p 50V Ceramic	AA

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DIGITAL UNIT (Continued)

RESISTORS

Ref. No.	Part No.	★	Description	Code
R6001	VRS-TV1JD102J	J	1k 1/16W Metal Oxide	AA
R6002	VRS-TV1JD102J	J	1k 1/16W Metal Oxide	AA
R6003	VRS-TV1JD102J	J	1k 1/16W Metal Oxide	AA
R6007	VRS-TV1JD105J	J	1M 1/16W Metal Oxide	AA
R6008	VRS-TV1JD101J	J	100 1/16W Metal Oxide	AA
R6009	VRS-TV1JD102J	J	1k 1/16W Metal Oxide	AA
R6010	VRS-TV1JD101J	J	100 1/16W Metal Oxide	AA
R6011	VRS-TV1JD105J	J	1M 1/16W Metal Oxide	AA
R6012	VRS-TV1JD101J	J	100 1/16W Metal Oxide	AA
R6013	VRS-TV1JD102J	J	1k 1/16W Metal Oxide	AA
R6014	VRS-TV1JD101J	J	100 1/16W Metal Oxide	AA
R6015	VRS-TV1JD105J	J	1M 1/16W Metal Oxide	AA
R6016	VRS-TV1JD101J	J	100 1/16W Metal Oxide	AA
R6017	VRS-TV1JD102J	J	1k 1/16W Metal Oxide	AA
R6018	VRS-TV1JD101J	J	100 1/16W Metal Oxide	AA
R6019	VRS-TV1JD273J	J	27k 1/16W Metal Oxide	AA
R6021	VRS-TV1JD103J	J	10k 1/16W Metal Oxide	AA
R6022	VRS-SV2HC680J	J	68 1/2W Metal Oxide	AA
R6023	VRS-TW2ED4R7J	J	4.7 1/4W Metal Oxide	AA
R6025	VRS-TV1JD102J	J	1k 1/16W Metal Oxide	AA
R6028	VRS-TV1JD562J	J	5.6k 1/16W Metal Oxide	AA
R6029	VRS-TV1JD471J	J	470 1/16W Metal Oxide	AA
R6030	VRS-TV1JD391J	J	390 1/16W Metal Oxide	AA
R6031	VRS-TV1JD471J	J	470 1/16W Metal Oxide	AA
R6032	VRS-TV1JD391J	J	390 1/16W Metal Oxide	AA
R6033	VRS-TV1JD391J	J	390 1/16W Metal Oxide	AA
R6035	VRS-TV1JD562J	J	5.6k 1/16W Metal Oxide	AA
R6036	VRS-TV1JD223J	J	22k 1/16W Metal Oxide	AA
R6037	VRS-TV1JD471J	J	470 1/16W Metal Oxide	AA
R6039	VRS-TV1JD471J	J	470 1/16W Metal Oxide	AA
R6041	VRS-TV1JD391J	J	390 1/16W Metal Oxide	AA
R6043	VRS-TV1JD562J	J	5.6k 1/16W Metal Oxide	AA
R6044	VRS-TV1JD223J	J	22k 1/16W Metal Oxide	AA
R6045	VRS-TV1JD391J	J	390 1/16W Metal Oxide	AA
R6046	VRS-TV1JD471J	J	470 1/16W Metal Oxide	AA
R6047	VRS-TV1JD471J	J	470 1/16W Metal Oxide	AA
R6048	VRS-TV1JD391J	J	390 1/16W Metal Oxide	AA
R6057	VRS-TW2ED470J	J	47 1/4W Metal Oxide	AA
R6058	VRS-TW2ED470J	J	47 1/4W Metal Oxide	AA
R6059	VRS-TW2ED470J	J	47 1/4W Metal Oxide	AA
R6060	VRS-TV1JD563J	J	56k 1/16W Metal Oxide	AA
R6061	VRS-TV1JD563J	J	56k 1/16W Metal Oxide	AA
R6062	VRS-TV1JD223J	J	22k 1/16W Metal Oxide	AA
R6064	VRS-TW2ED4R7J	J	4.7 1/4W Metal Oxide	AA
R6065	VRS-TW2ED4R7J	J	4.7 1/4W Metal Oxide	AA
R6026	VRS-TV1JD222J	J	2.2k 1/16W Metal Oxide	AA
R6027	VRS-TV1JD223J	J	22k 1/16W Metal Oxide	AA
R6070	VRS-TV1JD393J	J	39k 1/16W Metal Oxide	AA
R6071	VRS-TV1JD823J	J	82k 1/16W Metal Oxide	AA
R6072	VRS-TV1JD683J	J	68k 1/16W Metal Oxide	AA
R6074	VRS-TV1JD105J	J	1M 1/16W Metal Oxide	AA

RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R6075	VRS-TV1JD472J	J	4.7k 1/16W Metal Oxide	AA
R6077	VRS-TV1JD472J	J	4.7k 1/16W Metal Oxide	AA
R6078	VRS-TV1JD103J	J	10k 1/16W Metal Oxide	AA
R6079	VRS-TV1JD392J	J	3.9k 1/16W Metal Oxide	AA
R6080	VRS-TV1JD562J	J	5.6k 1/16W Metal Oxide	AA
R6081	VRS-TV1JD101J	J	100 1/16W Metal Oxide	AA
R6082	VRS-TV1JD101J	J	100 1/16W Metal Oxide	AA
R6083	VRS-TV1JD681J	J	680 1/16W Metal Oxide	AA
R6084	VRS-TV1JD821J	J	820 1/16W Metal Oxide	AA
R6085	VRS-TV1JD681J	J	680 1/16W Metal Oxide	AA
R6086	VRS-TV1JD102J	J	1k 1/16W Metal Oxide	AA
R6087	VRS-TV1JD102J	J	1k 1/16W Metal Oxide	AA
R6088	VRS-TV1JD472J	J	4.7k 1/16W Metal Oxide	AA
R6091	VRS-TV1JD101J	J	100 1/16W Metal Oxide	AA
R6092	VRS-TV1JD101J	J	100 1/16W Metal Oxide	AA
R6093	VRS-TV1JD101J	J	100 1/16W Metal Oxide	AA
R6094	VRS-TV1JD102J	J	1k 1/16W Metal Oxide	AA
R6095	VRS-TV1JD102J	J	1k 1/16W Metal Oxide	AA
R6096	VRS-TV1JD102J	J	1k 1/16W Metal Oxide	AA
R6097	VRS-TV1JD102J	J	1k 1/16W Metal Oxide	AA
R6098	VRS-TV1JD102J	J	1k 1/16W Metal Oxide	AA
R6099	VRS-TV1JD102J	J	1k 1/16W Metal Oxide	AA
R6100	VRS-TV1JD472J	J	4.7k 1/16W Metal Oxide	AA
R6101	VRS-TV1JD102J	J	1k 1/16W Metal Oxide	AA
R6102	VRS-TV1JD681J	J	680 1/16W Metal Oxide	AA
R6107	VRS-TV1JD223J	J	22k 1/16W Metal Oxide	AA

SWITCH

Ref. No.	Part No.	★	Description	Code
S6001	QSW-B0017CEZZ	J	PLL Adj.	AC

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
	QPLGN0478GEZZ	J	Plug 4-pin	AB
	QPLGN0778GEZZ	J	Plug 7-pin	AC
	QPLGN0878GEZZ	J	Plug 8-pin	AC
	QSOCN0457GEZZ	J	Socket 4-pin	AA

—— End of DIGITAL UNIT ——

DUNTK6904DE03
LED UNIT

DIODES

Ref. No.	Part No.	★	Description	Code
D2053	RH-PX0277CEZZ	J	LED, Temp. Monitor	AG
D2054	RH-PX0277CEZZ	J	Lamp Monitor	AG

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
	QPLGN0378GEZZ	J	Plug 3-pin	AB
	QSOCN0357GEZZ	J	Socket 3-pin	AA

—— End of LED UNIT ——

DUNTK6905DE03
R/C UNIT

INTEGRATED CIRCUIT

Ref. No.	Part No.	★	Description	Code
IC3001	RRMCU0185CEZZ	J	R/C Receiver IC	AL

CAPACITOR

Ref. No.	Part No.	★	Description	Code
C3001	VCEAGA0JW107M	J	100 6.3V Electrolytic	AB

RESISTOR

Ref. No.	Part No.	★	Description	Code
R3001	VRD-RA2BE220J	J	22 1/8W Carbon	AA

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
	QPLGN0378GEZZ	J	Plug 3-pin	AB
	QSOCN0357GEZZ	J	Socket 3-pin	AA

—— End of R/C UNIT ——

DUNTK6986DE03
LIGHT UP (1) UNIT

DIODES

Ref. No.	Part No.	★	Description	Code
D2058	RH-PX0278CEZZ	J	LED	AB
D2059	RH-PX0278CEZZ	J	LED	AB
D2060	RH-PX0278CEZZ	J	LED	AB
D2061	RH-PX0278CEZZ	J	LED	AB
D2062	RH-PX0278CEZZ	J	LED	AB

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
	QPLGN0278GEZZ	J	Plug 2-pin	AA
	QSOCN0257GEZZ	J	Socket 2-pin	AA

—— End of LIGHT UP (1) UNIT ——

DUNTK6987DE03
LIGHT UP (2) UNIT

DIODES

Ref. No.	Part No.	★	Description	Code
D2063	RH-PX0278CEZZ	J	LED	AB
D2064	RH-PX0278CEZZ	J	LED AB	

RESISTOR

Ref. No.	Part No.	★	Description	Code
R2190	VRD-RA2BE181J	J	180 1/8W Carbon	AA

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
	QPLGN0278GEZZ	J	Plug 2-pin	AA
	QSOCN0257GEZZ	J	Socket 2-pin	AA

—— End of LIGHT UP (2) UNIT ——

DUNTK7411DE01
RGB UNIT

INTEGRATED CIRCUIT

Ref. No.	Part No.	★	Description	Code
IC4401	VHiHD74LS86-1	J	HD74LS86P	AE

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q4401	VS2SC3198-Y-1	J	2SC3198 (Y)	AA
Q4402	VS2SC3198-Y-1	J	2SC3198 (Y)	AA
Q4403	VS2SC3198-Y-1	J	2SC3198 (Y)	AA

DIODES

Ref. No.	Part No.	★	Description	Code
D4401	VHD1SS119//-1	J	1SS119	AB
D4402	VHD1SS119//-1	J	1SS119	AB
D4403	VHD1SS119//-1	J	1SS119	AB
D4404	VHD1SS119//-1	J	1SS119	AB
D4405	VHD1SS119//-1	J	1SS119	AB
D4406	VHD1SS119//-1	J	1SS119	AB
D4407	VHD1SS119//-1	J	1SS119	AB
D4408	VHD1SS119//-1	J	1SS119	AB
D4409	VHD1SS119//-1	J	1SS119	AB
D4410	VHD1SS119//-1	J	1SS119	AB
D4411	VHD1SS119//-1	J	1SS119	AB
D4412	VHD1SS119//-1	J	1SS119	AB
D4413	VHD1SS119//-1	J	1SS119	AB
D4414	VHD1SS119//-1	J	1SS119	AB
D4415	VHD1SS119//-1	J	1SS119	AB

CAPACITORS

Ref. No.	Part No.	★	Description	Code
C4401	VCEAEA1CW106M	J	10 16V Electrolytic	AB
C4402	VCEAEA1CW106M	J	10 16V Electrolytic	AB
C4403	VCEAEA1CW106M	J	10 16V Electrolytic	AB
C4404	VCEAEA1HW105M	J	1 50V Electrolytic	AB
C4405	VCEAEA1HW105M	J	1 50V Electrolytic	AB
C4406	VCEAEA1HW105M	J	1 50V Electrolytic	AB
C4407	VCEAEA0JW107M	J	100 6.3V Electrolytic	AB
C4408	VCEAEA1CW107M	J	100 16V Electrolytic	AC
C4409	VCTYPA1EF104Z	J	0.1 25V Ceramic	AB
C4410	VCCCPA1HH100D	J	10p 50V Ceramic	AA
C4411	VCEAEA1CW106M	J	10 16V Electrolytic	AB
C4412	VCE9EA1CW106M	J	10 16V Electrolytic (N.P)	AC

RESISTORS

Ref. No.	Part No.	★	Description	Code
R4401	VRD-RA2EE470J	J	47 1/4W Carbon	AA
R4402	VRD-RA2EE470J	J	47 1/4W Carbon	AA
R4403	VRD-RA2EE470J	J	47 1/4W Carbon	AA
R4404	VRD-RA2BE471J	J	470 1/8W Carbon	AA
R4405	VRD-RA2BE471J	J	470 1/8W Carbon	AA
R4406	VRD-RA2BE471J	J	470 1/8W Carbon	AA
R4407	VRD-RA2BE152J	J	1.5k 1/8W Carbon	AA
R4408	VRD-RA2BE152J	J	1.5k 1/8W Carbon	AA
R4409	VRD-RA2BE152J	J	1.5k 1/8W Carbon	AA
R4410	VRD-RA2BE821J	J	820 1/8W Carbon	AA
R4411	VRD-RA2BE821J	J	820 1/8W Carbon	AA
R4412	VRD-RA2BE821J	J	820 1/8W Carbon	AA
R4413	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R4415	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R4422	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R4424	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R4414	VRD-RA2BE153J	J	15k 1/8W Carbon	AA
R4416	VRD-RA2BE122J	J	1.2k 1/8W Carbon	AA
R4417	VRD-RA2BE103J	J	10k 1/8W Carobn	AA
R4418	VRD-RA2BE103J	J	10k 1/8W Carobn	AA
R4419	VRD-RA2BE103J	J	10k 1/8W Carobn	AA
R4420	VRD-RA2BE103J	J	10k 1/8W Carobn	AA
R4428	VRD-RA2BE103J	J	10k 1/8W Carobn	AA
R4421	VRD-RA2BE271J	J	270 1/8W Carbon	AA
R4423	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R4427	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R4425	VRD-RA2BE181J	J	180 1/8W Carbon	AA
R4426	VRD-RA2BE223J	J	22k 1/8W Carbon	AA
R4429	VRD-RA2BE180J	J	18 1/8W Carbon	AA
R4430	VRD-RU2EE330J	J	33 1/4W Carbon	AA
R4431	VRD-RU2EE330J	J	33 1/4W Carbon	AA
R4432	VRD-RU2EE330J	J	33 1/4W Carbon	AA

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
J4401	QSOCN1539CEZZ	J	Socket 15-pin	AH
	QPLGN0580GEZZ	J	Plug 5-pin	AB
	QPLGN0780GEZZ	J	Plug 7-pin	AC
	QPLGN1080GEZZ	J	Plug 10-pin	AC

—— End of RGB UNIT ——

RDENC0032CEZZ
BALLAST UNIT

PACKAGED CIRCUITS

Ref. No.	Part No.	★	Description	Code
HB701	9ATHB701A	J	Hybrid IC, HB701A	BR
HB702	9ATSTR-D1005T	J	Hybrid IC, STR-D1005T	AV

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
TR701	VS2SK1180//-1	J	2SK1180	AT
TR702	VS2SC1815YW1E	J	2SC1815 (Y)	AB
TR703	VS2SC1815YW1E	J	2SC1815 (Y)	AB
TR704	VS2SK1180//-1	J	2SK1180	AT
TR705	VS2SK1180//-1	J	2SK1180	AT
TR706	VS2SK1180//-1	J	2SK1180	AT
TR707	VS2SK1180//-1	J	2SK1180	AT
TR708	VS2SC1815YW1E	J	2SC1815 (Y)	AB

DIODES

Ref. No.	Part No.	★	Description	Code
D701	9ATRBV606	J	RBV-606	AE
D702	9ATFMG-G36S	J	FMG-G36S	AQ
D703	9ATAU02Z	J	AU02Z	AF
D707	9ATAU02Z	J	AU02Z	AF
D708	9ATAU02Z	J	AU02Z	AF
D709	9ATAU02Z	J	AU02Z	AF
D710	9ATAU02Z	J	AU02Z	AF
D711	9ATSHV-12	J	SHV-12	AP
D712	9ATEM01Z	J	EM01Z	AE
ZD701	9ATHZ24-2	J	Zener Diode, HZ24-2	AC
ZD702	9ATMZ306-B	J	Zener Diode, MZ306-B	AA
ZD703	9ATHZ3B-2	J	Zener Diode, HZ3B-2	AA
ZD704	9ATHZ3C-3	J	Zener Diode, HZ3C-3	AC
ZD705	9ATHZ3C-3	J	Zener Diode, HZ3C-3	AC

COILS ANDTRANSFORMERS

Ref. No.	Part No.	★	Description	Code
⚠L701	9AT1017-04502	J	Choke Coil	AZ
L702	9ATB092A	J	Choke Coil	AV
L703	9ATB092C	J	Choke Coil	AW
⚠L704	9ATSC-03-10G	J	Choke Coil	AZ
⚠T701	9ATB127A	J	Transformer	AZ
T702	9ATMS150-01	J	Transformer	AU
⚠T703	9ATB128	J	Transformer	AX
⚠T704	9ATB123H	J	Transformer	AZ

PACKAGED CIRCUITS

Ref. No.	Part No.	★	Description	Code
⚠PC701	9ATPC817A	J	Photo Couplor (P0817A)	AH
RTH701	9ATTD5FFL5R0P	J	Power Thermistor	AL
SSS701	9ATK1V10	J	K1V10	AN
SSS702	9ATK1V10	J	K1V10	AN
⚠TFR701	9ATCF55T0.33	J	Temp. Fuse Resistor, 0.33Ω, 33Ω, 169°C	AT

CAPACITORS

Ref. No.	Part No.	★	Description	Code
⚠C701	9ATCQU2A104MT	J	0.1 AC250V Polypro Film	AG
⚠C702	9ATCQU2A334MT	J	0.33 AC250V Polypro Film	AE
⚠C703	9ATKD102M	J	1000p AC400V Ceramic	AL
⚠C704	9ATKD102M	J	1000p AC400V Ceramic	AL
C705	9ATCEA1HGE100	J	10 50V Electrolytic	AD
C706	9AT200MXR560M	J	560 200V Electrolytic	AD
C707	9AT200MXR560M	J	560 200V Electrolytic	AD
C708	9ATCEA1HGE4R7	J	4.7 50V Electrolytic	AD
C709	9ATCQE4105KF	J	1 400V Polypro Film	AL
C710	9ATCEA1CGE101	J	100 16V Electrolytic	AE
C711	9ATCQE6103KF	J	0.01 630V Polypro Film	AF
C712	9ATCQE6103KF	J	0.01 630V Polypro Film	AF
C713	9ATCQE6103KF	J	0.01 630V Polypro Film	AF
C714	9ATCQE6103KF	J	0.01 630V Polypro Film	AF
⚠C715	9ATCKDNS102MB	J	1000p AC400V Ceramic	AF
C716	9ATCKDHT221KB	J	220p 500V Polypro Film	AD
C717	VCEAGA1EW107M	J	100 25V Electrolytic	AD
C719	VCEAGA1EW107M	J	100 25V Electrolytic	AD
C720	VCEAGA1EW107M	J	100 25V Electrolytic	AD
C721	VCEAGA1EW107M	J	100 25V Electrolytic	AD
C722	VCEAGA1EW107M	J	100 25V Electrolytic	AD
C723	9ATCEA1CGE221	J	220 16V Electrolytic	AE
C724	9ATCQE4474KF	J	0.47 400V Polypro Film	AN
C725	9ATKD3J152MDU	J	1500p 8kV Ceramic	AM

RESISTORS

Ref. No.	Part No.	★	Description	Code
R701	9ATERG-2SJ223	J	22k 2W Metal	AC
R702	9ATERG-1SJ563	J	56k 1W Metal	AC
R703	9ATERG-1SJ563	J	56k 1W Metal	AC
R704	VRD-RA2EE274J	J	270k 1/4W Carbon	AA
R705	VRD-RA2EE242J	J	2.4k 1/4W Carbon	AA
R706	9ATERG-1SJ121	J	120 1W Metal	AF
R707	9ATERG12SJ101	J	100 1/2W Metal	AA
R708	VRD-RA2HD334J	J	330k 1/2W Carbon	AA
R709	VRD-RA2EE123J	J	12k 1/4W Carbon	AA
R710	VRD-RA2EE273J	J	27k 1/4W Carbon	AA
R711	VRD-RA2EE102J	J	1k 1/4W Carbon	AA
R714	VRD-RA2EE102J	J	1k 1/4W Carbon	AA
R716	VRD-RA2EE102J	J	1k 1/4W Carbon	AA
R718	VRD-RA2EE102J	J	1k 1/4W Carbon	AA
R720	VRD-RA2EE102J	J	1k 1/4W Carbon	AA
R727	VRD-RA2EE103J	J	10k 1/4W Carbon	AA
R713	VRD-RA2EE100J	J	10 1/4W Carbon	AA
R715	VRD-RA2EE100J	J	10 1/4W Carbon	AA
R717	VRD-RA2EE100J	J	10 1/4W Carbon	AA
R719	VRD-RA2EE100J	J	10 1/4W Carbon	AA
R721	VRD-RA2HD394J	J	390k 1/2W Carbon	AA
R722	VRD-RA2HD221J	J	220 1/2W Carbon	AA
R723	9ATERG1SJ150	J	15 1W Metal	AC
R725	VRD-RA2EE273J	J	27k 1/4W Carbon	AA
R726	VRD-RA2EE102J	J	1k 1/4W Carobn	AA
R728	9ATMN5R-10K	J	10k 5W Cement	AF
R729	9ATMN5R-10K	J	10k 5W Cement	AF

RDENC0032CEZZ
BALLAST UNIT (Continued)

RELAYS

Ref. No.	Part No.	★	Description	Code
RY701	9ATG6B1114PUS	J	Relay	AS
RY702	9ATG6C2117PUS	J	Relay	AY

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
⚠F701	9ATULTSC-5A	J	Fuse 5A, 125V	AG
FB701	9ATFBR07HA121	J	Ferrite Bead	AF
FB702	9ATFBR07HA121	J	Ferrite Bead	AF
FB703	9ATFBR07HA121	J	Ferrite Bead	AF
FB704	9ATFBR07HA121	J	Ferrite Bead	AF
FH701	QFSHD1002CEZZ	J	Fuse Holder	AA
FH702	QFSHD1002CEZZ	J	Fuse Holder	AA
⚠G701	9ATGD6261.5KV	J	Spark Gap	AT
⚠TF701	9 A T S 3	J	Temp. Fuse, 130°C	AG

— End of BALLAST UNIT —

RDENC0033CEZZ
POWER UNIT

INTEGRATED CIRCUITS

Ref. No.	Part No.	★	Description	Code
IC1	95KUCH0078ZZ	J	M67209	AM
IC2	95KUCC0016EZ	J	M5F78M09L	AG
IC3	95KUCB0063AZ	J	µPC2405HF	AK
IC4	95KUCB0030AZ	J	µPC7812HF-1	AG
IC5	95KUCZ0097ZZ	J	M5237L	AG
IC6	95KUCB0034DZ	J	µPC79N12H	AG
IC7	95KUCB0054BZ	J	µPC79M08HF	AG

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q1	95KUAC0237AZ	J	2SC4518	AK
Q2	95KUAC0027CK	J	2SC2655	AD
Q5	95KUAC0004AK	J	2SC945	AB
Q6	95KUAB0015AZ	J	2SB1038	AG

DIODES

Ref. No.	Part No.	★	Description	Code
DS1	95KUBB0130DB	J	D2SB60	AG
DS2	95KUBB0158AT	J	ESAB92M-02	AG
D1	95KUBC0169CK	J	ERA22-06	AC
D3	95KUBC0221AK	J	ERA18-02	AC
D6	95KUBC0221AK	J	ERA18-02	AC
D8	95KUBC0221AK	J	ERA18-02	AC
D9	95KUBC0221AK	J	ERA18-02	AC
D4	95KUBA0005KZ	J	1SS55	AB
D5	95KUBC0178AB	J	D1NL20	AD
D7	95KUBC0071AC	J	ERB81-004	AF
D10	95KUBC0236AB	J	15DF2	AD
D11	95KUBC0171BT	J	30DF2	AG
D13	95KUBC0070AZ	J	ERA81-004	AH
ZD1	95KUBDAK130C	J	RD13ESAB2	AB
ZD2	95KUBDAK110C	J	RD11ESAB2	AB
ZD3	95KUBDAK100C	J	RD10ESAB2	AB
ZD4	95KUBDAK6R2C	J	RD6.2ESAB2	AB
ZD5	95KUBDAK200B	J	RD20ESAB1	AB
SCR1	95KUDA0033DL	J	Thyristor (CR02AM-6)	AD

PACKAGED CIRCUIT

Ref. No.	Part No.	★	Description	Code
⚠PC1	95KUDC0103BZ	J	Photo Couplor (TLP621-2)	AG

COILS AND TRANSFORMER

Ref. No.	Part No.	★	Description	Code
⚠L1	95KUKZ0331ZZ	J	Filter (ELF18D-216)	AL
L2	95KUKZ0052ZZ	J	SB Coil (SBC-05)	AG
⚠T1	95K130295005	J	Transformer (PTTN31)	AZ

RDENC0033CEZZ

POWER UNIT (Continued)

CONTROLS

Ref. No.	Part No.	★	Description	Code
VR2	95KUFBA502CD	J	5k(B) +12V Adj.	AC
VR3	95KUFBA302CD	J	3k(B) +5V Adj.	AC

CAPACITORS

Ref. No.	Part No.	★	Description	Code
⚠C2	95KUGFM104EK	J	0.1 250V Film	AG
⚠C3	95KUGCQ102AB	J	0.001 125V Ceramic	AC
⚠C4	95KUGCQ102AB	J	0.001 125V Ceramic	AC
⚠C5	95KUGCQ472AB	J	4700p 125VCeramic	AD
C6	95KUGBM181BR	J	180 250V Electrolytic	AM
C7	95KUGFM103EN	J	0.01 250V Ceramic	AC
C8	95KUGCU101AJ	J	100p 1kV Ceramic	AC
C9	95KUGFF104BQ	J	0.1 Film	AC
C10	95KUGCU101AJ	J	100p 1kV Ceramic	AC
C11	95KUGAF4R7HN	J	4.7 50V Electrolytic	AB
C12	95KUGFF102BQ	J	0.001 Film	AB
C13	95KUGFF473BQ	J	0.047 Film	AB
C14	95KUGFF683BQ	J	0.068 Film	AB
C15	95KUGAE470HN	J	47 35V Electrolytic	AC
C16	95KUGAC471GK	J	470 16V Electrolytic	AE
C17	95KUGAD221GK	J	220 25V Electrolytic	AE
C18	95KUGAE470HN	J	47 35V Electrolytic	AC
C19	95KUGAD222FE	J	2200 25V Electrolytic	AG
C20	95KUGAC102GK	J	1000 16V Electrolytic	AF
C21	95KUGAC100HN	J	10 16V Electrolytic	AB
C22	95KUGAC222JP	J	2200 16V Electrolytic	AH
C23	95KUGAC471HN	J	470 16V Electrolytic	AD
C24	95KUGAC470HN	J	47 16V Electrolytic	AB
C26	95KUGAC331FD	J	330 16V Electrolytic	AF
C27	95KUGAC470HN	J	47 16V Electrolytic	AB
C28	95KUGAC470HN	J	47 16V Electrolytic	AB
C29	95KUGAF010HN	J	1 50V Electrolytic	AB
C30	95KUGAC101HN	J	100 16V Electrolytic	AC
C31	95KUGAF010HN	J	1 50V Electrolytic	AB
C32	95KUGAC101HN	J	100 16V Electrolytic	AC
C33	95KUGFF473BQ	J	0.047 Film	AB
⚠C34	95KUGCZ472BL	J	4700p125V Ceramic	AD
⚠C35	95KUGCZ472BL	J	4700p125V Ceramic	AD
C36	95KUGCZ102AD	J	0.001 Ceramic	AB
⚠C37	95KUGFM104EK	J	0.1 250V Film	AG

RESISTORS

Ref. No.	Part No.	★	Description	Code
⚠R1	95KUECC395AE	J	3.9M 1/2W Solid	AB
R2	95KUEAE1R0AA	J	1 2W Carbon	AD
R3	95KUEFD273AU	J	27k 1W Metal	AB
R4	95KUEFD273AU	J	27k 1W Metal	AB
R5	95KUEEC334AT	J	330k1/2W Carbon	AA
R6	95KUEFE473AV	J	47k 2W Metal	AC
R7	95KUEEC180AT	J	18 1/2W Carbon	AA

RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R9	95KUEFD100AU	J	10 1W Metal	AB
R10	95KUEFD100AU	J	10 1W Metal	AB
R11	95KUEEC471AT	J	470 1/2W Carbon	AA
R12	95KUEEB472BF	J	4.7k Carbon	AA
R13	95KUEEB102BF	J	1k Carbon	AA
R14	95KUEEB183BF	J	18k Carbon	AA
R15	95KUEEB392BF	J	3.9k Carbon	AA
R16	95KUEEC151AT	J	150 1/2W Carbon	AA
R21	95KUEEB272BF	J	2.7k Carobn	AA
R22	95KUEEB561BF	J	560 Carbon	AA
R23	95KUEEB472BF	J	4.7k Carbon	AA
R24	95KUEEB272BF	J	2.7k Carobn	AA
R25	95KUEEB472BF	J	4.7k Carbon	AA
R34	95KUEEB102BF	J	1k Carbon	AA
R30	95KUEEC221AT	J	220 1/2W Carbon	AA
R31	95KUEEC221AT	J	220 1/2W Carbon	AA
R32	95KUEZ0403ZK	J	6.8 Posistor	AF
R33	95KUEEB101BF	J	100 Carbon	AA
R35	95KUEEB221BF	J	220 Carbon	AA
R40	95KUEEB221BF	J	220 Carbon	AA
R36	95KUEEB123BF	J	12k Carobn	AA
R37	95KUES4301AL	J	4.3k Carbon	AA
R39	95KUEEB184BF	J	180k Carbon	AA

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
⚠F1	95KPJCCB2001	J	Fuse 2A 125V	AE
FH1	95KPZZ0073ZZ	J	Fuse Holder	AA
PA	95KPKZ0529ZZ	J	Connector, 9-pin	AD
PB	95KPKZ0540ZZ	J	Connector, 4-pin	AB
PC	95KPKZ0522ZZ	J	Connector, 2-pin	AB

—— End of POWER UNIT ——

RUNTK0320CEZZ
RELAY UNIT

INTEGRATED CIRCUIT

Ref. No.	Part No.	★	Description	Code
IC51	95KUCC0021GZ	J	M5F78M12	AG

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q51	95KUAZ0014AZ	J	BA1A4M	AB
Q52	95KUAZ0014AZ	J	BA1A4M	AB

DIODES

Ref. No.	Part No.	★	Description	Code
D51	95KUBC0150AZ	J	11ES1	AB
D52	95KUBC0150AZ	J	11ES1	AB
D53	95KUBC0150AZ	J	11ES1	AB
D54	95KUBC0150AZ	J	11ES1	AB
D55	95KUBA0004AZ	J	1SS53	AB
D56	95KUBA0004AZ	J	1SS53	AB
⚠V51	95KUEZ0401ZZ	J	Varistor	AF

COIL AND TRANSFORMER

Ref. No.	Part No.	★	Description	Code
⚠L51	95K829025009	J	Choke Coil	AR
⚠T51	95K815025005	J	Transformer	AV

CAPACITORS

Ref. No.	Part No.	★	Description	Code
C51	95KUGAE102GQ	J	1000 35V Electrolytic	AF
C53	95KUGAD470GQ	J	47 16V Electrolytic	AB
⚠C54	95KUGFZ473EG	J	0.047 Film	AE
⚠C55	95KUGFZ104EG	J	0.1 250V Film	AE

RELAYS

Ref. No.	Part No.	★	Description	Code
⚠RY51	95KPHZ0096ZZ	J	Relay	AL
⚠RY52	95KPHZ0096ZZ	J	Relay	AL

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
⚠F51	95KPJCCB5001	J	Fuse, 5A, 125V	AF
FH	95KPZZ0073ZZ	J	Fuse Holder	AA
AB	95KPKZ0194ZZ	J	Connector, 3-pin	AC
AC	95KPKZ1008ZZ	J	Connector, 4-pin	AC
BA	95KPKZ0221ZZ	J	Connector, 3-pin	AB
BU	95KPKZ0526ZZ	J	Connector, 6-pin	AC
FA	95KPKZ1008ZZ	J	Connector, 4-pin	AC
PL	95KPKZ0522ZZ	J	Connector, 2-pin	AB
PO	95KPKZ0194ZZ	J	Connector, 3-pin	AC

—— End of RELAY UNIT ——

RRMCG0843CESA
REMOTE CONTROL UNIT

INTEGRATED CIRCUIT

Ref. No.	Part No.	★	Description	Code
IC3001	RH-iX1288PAZZ	J	Microprocessor	AN

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q3001	VS2SD596DV3-1	J	2SD596	AC
Q3002	VS2SC2411KQ-1	J	2SC2411K	AC
Q3003	VS2SA812M5/-1	J	2SA812	AA

DIODES

Ref. No.	Part No.	★	Description	Code
D3001	RH-PX0128PAZZ	J	LED, SE313	AE
D3002	RH-PX0128PAZZ	J	LED, SE313	AE
D3003	RH-PX0128PAZZ	J	LED, SE313	AE
D3004/ 3005/ 3006/ 3007/ 3008/ 3009	DUNT-0055PAZZ	J	LEDs, SLP-681C ×6 pcs	AN
D3010	VHD1S2837//-1	J	1S2837	AB

CERAMIC FILTER

Ref. No.	Part No.	★	Description	Code
CF3001	RFiLA0003CEZZ	J	Ceramic Osc., 455kHz	AE
	or			
	RFiLA0095PAZZ	J		AC

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
BZ3001	RALMB0007PAZZ	J	Buzzer	AF
SW3001	QSW-P0082PAZZ	J	Switch, EVQPBC05K	AB
SW3002	QSW-P0082PAZZ	J	Switch, EVQPBC05K	AB

CABINET PARTS

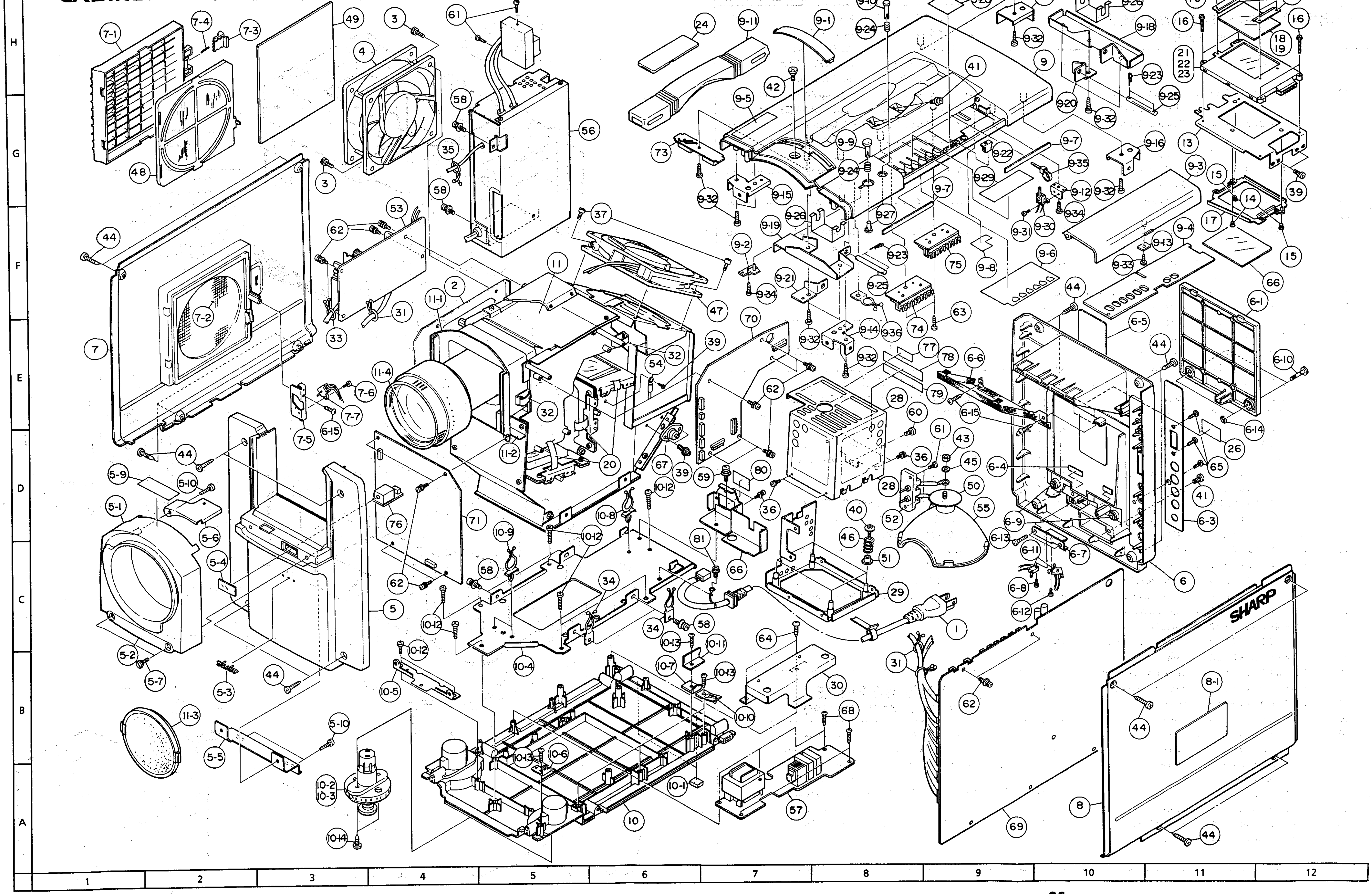
Ref. No.	Part No.	★	Description	Code
	GCABA0280AASA	J	Top Cabinet	AM
	GCABB0234AASA	J	Bottom Cabinet	AF
	GCOVH0101PASA	J	Battery Cover	AC
	QSW-Z0020PAZZ	J	Control Keys	BB
	QTANZ0216PAZZ	J	Batt. Terminal ± (A)	AB
	QTANZ0230PAZZ	J	Batt. Terminal ± (B)	AB
	QTANZ0269PAZZ	J	Batt. Terminal +	AB
	QTANZ0270PAZZ	J	Batt. Terminal −	AB
	XYBSD20P06000	J	Screw, 2.0×6, (4 used)	AA
	XYBSF20P08000	J	Screw, 2.0×8, (3 used)	AA

—— End of REMOTE CONTROL UNIT ——

CABINET AND MECHANICAL PARTS

Ref. No.	Part No.	★	Description	Code
⚠1	QACCU5008CEZZ	J	AC Cord	AV
2	LANGT9837CE00	J	DC Fan Bracket	AT
3	LX-BZ3214CEFF	J	Screw	AB
4	NFANR0020CE00	J	DC Fan	BB
5	CBDYF1029CEK1	J	Front Body Ass'y	BD
5-1	GBDYF1015CEKD	J	Front Body-B	AR
5-2	GCOVA1356CESA	J	R/C Receiver Cover	AN
5-3	HBDGB1017CESA	J	Badge "SHARP"	AC
5-4	HiNDP3683CESA	J	Indication Plate, R/C Receiver	AC
5-5	LANGT9816CEFW	J	Frame Bracket	AE
5-6	LANGT9818CEFW	J	Frame Bracket	AC
5-7	LX-HZ3038CEFF	J	Screw	AB
5-8	*Not used*			
5-9	HiNDP3686CESE	J	Caution Label	AD
5-10	XEPSD40P12000	J	Screw	AA
6	CBDYR1003CEK1	J	Rear Cabinet Ass'y	BD
6-1	GCOVA1404CEKB	J	Lump Cover	AL
6-3	HiNDP3900CESA	J	Indication Plate, Jack	AE
6-4	HiNDP3928CESA	J	FCC Indication Plate	AE
6-5	HiNDP3902CESA	J	Indication Plate, Model	AD
6-6	HPNC-0231CESB	J	Rear Punching	AL
6-7	LANGQ1306CEFW	J	Bracket	AD
6-8	XSPSF20P06000	J	Screw	AA
6-9	LX-NZ3102CEFW	J	Nut	AB
6-10	LX-TZ3054CESF	J	Screw	AD
6-11	QCNW-3118CEZZ	J	Leaf Switch	AP
6-12	XBPSD26P04000	J	Screw	AA
6-13	XEPSD40P12000	J	Screw	AA
6-14	XRESJ30-06000	J	E-Ring	AA
6-15	XTASD30P12000	J	Screw	AA
7	CBDYS1031CEK1	J	Left Body Ass'y	BA
7-1	GCOVA1355CEKD	J	Fan Cover	AL
7-2	HPNC-0230CESA	J	Fan Punching	AL
7-3	JBTN-1677CESD	J	Button	AF
7-4	MSPRC0118CEFW	J	Spring	AB
7-5	LANGQ1295CEFW	J	Leaf Switch Bracket	AC
7-6	XBPSD26P04000	J	Screw	AA
7-7	QCNW-2792CEZZ	J	Leaf Switch	AH
8	CBDYS1030CEK1	J	Right Cabinet Ass'y	AW
8-1	HDECA0703CESA	J	Decoration Plate	AE
9	CBDYT1004CEK1	J	Top Body Ass'y	BN
9-1	GCOVA1357CESA	J	Top Cover	AH
9-2	GCOVA1358CESA	J	LED Cover	AC
9-3	GDORT1049CEKD	J	Door	AH
9-4	HiNDP3899CESA	J	Indication Plate, Control	AE
9-5	HiNDP3827CESB	J	Door Seal	AD
9-6	HiNDP3723CEZZ	J	Body Rear Seal	AE
9-7	HiNDP3724CEZZ	J	Indoor Seal	AD
9-8	HiNDP3725CEZZ	J	Body Rear Seal	AC
9-9	JBTN-1674CESF	J	Button, Power	AE
9-10	JBTN-1675CESB	J	Button, Focus	AE
9-11	JHNDA1014CESB	J	Grip	
9-12	LANGQ1296CEFW	J	Leaf Switch Bracket	AC
9-13	LANGT9788CEZZ	J	Plate	AC
9-14	LANGT9802CEFW	J	Body Bracket	AD
9-15	LANGT9803CEFW	J	Body Bracket	AD
9-16	LANGT9804CEFW	J	Body Bracket	AC
9-17	LANGT9805CEFW	J	Body Bracket	AC
9-18	LANGT9810CEFW	J	Grip Bracket	AF
9-19	LANGT9811CEFW	J	Grip Bracket	AG
9-20	LANGT9812CE00	J	Grip Bracket	AF
9-21	LANGT9813CE00	J	Grip Bracket	AF
9-22	LHLDZ3035GEZZ	J	Magnet Holder	AD
9-23	LX-PZ3010CEFD	J	Pin	AA
9-24	MSPRC0129CEFW	J	Spring	AA
9-25	NSFTH0010CE00	J	Shaft	AC
9-26	PCOVU2042CE00	J	Light Cover	AC
9-27	PGiDM0015CE00	J	Button, Guide	AC
9-28	PMiR-0030CEZZ	J	Mirror	AA
9-29	PMiR-0031CEZZ	J	Mirror	AC
9-30	QCNW-2793CEZZ	J	Leaf Switch	AH
9-31	XBPSD26P04000	J	Screw	AA
9-32	XEPSD40P12000	J	Screw	AA
9-33	XESSN20P06000	J	Screw	AA
9-34	XTASD30P12000	J	Screw	AA
9-35	LHLDW1033CE00	J	Wire Holder	AA
9-36	LHLDW1046CEZZ	J	Wire Holder	AA
10	CBDYU1005CEK1	J	Bottom Cabinet Ass'y	BC
10-1	GLEGG9032CE00	J	Rubber Leg	AC
10-2	GLEGP9068CEKA	J	Right Leg	AP
10-3	GLEGP9069CEKA	J	Left Leg	AP
10-4	LANGT9801CEFW	J	Mechanical Bracket	AP
10-5	LANGT9898CEFW	J	PWB Bracket	AD
10-6	LANGT9838CEFW	J	Bracket	AC
10-7	LANGT9839CEFW	J	Ground Plate	AC
10-8	LHLDW1007GEZZ	J	Wire Holder	AB
10-9	LHLDW1093GEZZ	J	Wire Holder	AB
10-10	LHLDZ1616CEZZ	J	P.W.B Holder	AB
10-11	PZETV0519CEZZ	J	Insulating Sheet	AC
10-12	XEPSD40P12000	J	Screw	AA
10-13	XTASD30P12000	J	Screw	AA
10-14	XTASF40P12000	J	Screw	AA
11	CCHSK0004CE01	J	Optics Mech. Ass'y	**
11-1	GCOVH1223CEKZ	J	Lens Cover	AG
11-2	LANGT9806CEFW	J	Lens Cover Bracket	AE
11-3	PCAPH1019CESA	J	Lens Cap	AG
11-4	PLNS-0019CESA	J	Lens	CK
12	LANGK0385CEFW	J	Bracket, Polarization Plate	AD
13	LANGT9820CE00	J	Modular Panel LCD (R.G.B.)	AV
14	LX-BZ3215CEFF	J	Screw	AA
15	LX-BZ3216CEFF	J	Screw	AA
16	LX-BZ3237CEFF	J	Screw	AC
17	PFiLW0012CEZZ	J	Polarization Plate Filter-B	AZ

CABINET AND MECHANICAL PARTS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SHARP

CABINET AND MECHANICAL PARTS
(Continued)

Ref. No.	Part No.	★	Description	Code
18	PFiLW0015CEZZ	J	Polarization Plate Filter-A (Red)	AX
19	PFiLW0016CEZZ	J	Polarization Plate Filter-A (Green, Blue)	AX
20	QCNW-2290CEZZ	J	Flexible Module Connector	AN
21	RUNTK0297CEZZ	J	G-LCD Unit	**
22	RUNTK0298CEZZ	J	R-LCD Unit	**
23	RUNTK0299CEZZ	J	B-LCD Unit	**
24	GCOVA1367CESB	J	Grip Cover	AD
25	*Not used*			
26	HiNDP3919CEZZ	J	Number Label	AC
27	*Not used*			
28	LANGQ9115CEFD	J	Lamp Case, Top	AQ
29	LANGQ9116CEFD	J	Lamp Case, Bottom	AT
30	LANGT9808CEFW	J	Ballast Module Bracket	AG
31	LHLDW1009CEZZ	J	Wire Holder	AA
32	LHLDW1028GEZZ	J	Wire Holder	AB
33	LHLDW1033CE00	J	Wire Holder	AA
34	LHLDW1046CEZZ	J	Wire Holder	AA
35	LHLDW1060CEZZ	J	Wire Holder	AB
36	LX-BZ3086CEFD	J	Screw	AA
37	LX-BZ3214CEFF	J	Screw	AB
39	LX-BZ3220CEFD	J	Screw	AA
40	LX-BZ3218CEFD	J	Screw	AA
41	LX-HZ3013CEFF	J	Screw	AA
42	LX-HZ3038CEFF	J	Screw	AB
43	LX-NZ3108CEFN	J	Hexagon Nut	AA
44	LX-TZ3060CESC	J	Screw	AB
45	LX-WZ3102CEFN	J	Washer	AA
46	MSPRC0114CEFW	J	Lamp Spring	AA
47	NFANR0025CE00	J	AC Fan	BB
48	PFiLD0005CEZZ	J	Air Filter	AM
49	PFiLD0007CEZZ	J	Filter-2	AF
50	PRDAR1384CEFW	J	Lamp Heat Sink	AC
51	PSPAF0010CEFD	J	Spacer (Lamp)	AB
52	QPLGN0284CEZZ	J	Plug, 2pin (Lamp)	AV
53	RDENC0033CEZZ	–	Powe Unit	—
54	RH-HZ0017CEZZ	J	Thermistor (TH3001)	AN
⚠55	RLMPF0009CEZZ	J	Lamp	CE
56	RDENC0032CEZZ	–	Ballast Module Unit	—
57	RUNTK0320CEZZ	J	Back-up Relay Unit	BD
58	XBPSD40P08JS0	J	Screw	AA
59	XBPSD40P08J00	J	Screw	AA
60	XBTSF40P06000	J	Screw	AA
61	XBBSD30P08000	J	Screw	AA
62	XHPSD30P08WS0	J	Screw	AA
63	*Not used*			
64	XTASD40P16000	J	Screw	AA
65	XHBSN30P08000	J	Screw	AA
66	LANGQ4044CEFW	J	Switch Bracket	AH
⚠67	RBiM-0001CEZZ	J	Bimetal	AN

Ref. No.	Part No.	★	Description	Code
68	XEPSD30P10000	J	Screw	AA
69	DUNTK6901DE53	–	Main PWB Unit	—
70	DUNTK6902DE03	–	Sub PWB Unit	—
71	DUNTK6903DE03	–	Digital PWB Unit	—
73	DUNTK6904DE03	–	LED PWB Unit	—
74	DUNTK6986DE03	–	Light up PWB (1) Unit	—
75	DUNTK6987DE03	–	Light up PWB (2) Unit	—
76	DUNTK6905DE03	–	R/C Receiver Unit	—
77	TLABZ0488CEZZ	J	Caution Label, High Temperature	AC
78	HiNDP3932CEZZ	J	Indication Plate, Inlamp (English)	AC
79	HiNDP3933CEZZ	J	Indication Plate, Inlamp (France)	AC
80	TCAUS3153CEZZ	J	Caution Label, Fuse	AB
81	XBPSD30P06KS0	J	Screw	AA

SUPPLIED ACCESSORIES

ACCESSORIES

11-3	PCAPH1019CESA	J	Lens Cap (installed)	AG
48	PFiLD0005CEZZ	J	Air Filter (one already installed)	AM
	QPLGZ0111CEZZ	J	BNC Connector (2 pcs)	AX
	RRMCG0843CESA	J	Remote Control Unit	BQ

ACCESSORIES
(NOT REPLACEMENT ITEM)

SSAKA0170CEZZ	–	Polystyrene Cover	—
TCADN3044CEZZ	–	Resist Card	—
TCAUH1133CEZZ	–	Air Filter Label	—
TGAN-1277CEZZ	–	Guarantee Card	—
TiNS-4743CEZZ	–	Operation Manual	—
UBATU0019CEZZ	–	Dry Batteries, Type AA (3 pcs)	—

PACKING PARTS
(NOT REPLACEMENT ITEM)

SPAKC4256CEZZ	–	Packing Case	—
SPAKP0603CEZZ	–	Polystyrene mat	—
SPAKX2250CEZZ	–	Buffer Material (Top and Bottom)	—
SSAKH0133CEZZ	–	Polystyrene Sack, for AC Cord	—
TLABK0001TAZZ	–	Number Card	—

PACKING OF THE SET